



# THE UNIVERSITY *of* EDINBURGH

This thesis has been submitted in fulfilment of the requirements for a postgraduate degree (e.g. PhD, MPhil, DClinPsychol) at the University of Edinburgh. Please note the following terms and conditions of use:

- This work is protected by copyright and other intellectual property rights, which are retained by the thesis author, unless otherwise stated.
- A copy can be downloaded for personal non-commercial research or study, without prior permission or charge.
- This thesis cannot be reproduced or quoted extensively from without first obtaining permission in writing from the author.
- The content must not be changed in any way or sold commercially in any format or medium without the formal permission of the author.
- When referring to this work, full bibliographic details including the author, title, awarding institution and date of the thesis must be given.

**Morphologization and Rule Death in Old  
English:  
A Stratal Optimality Theoretic Account of High  
Vowel Deletion**

Penelope Jane Thompson

Thesis submitted for the degree of PhD English  
Language  
The University of Edinburgh  
2012



## Abstract

The intricacies and exceptions of high vowel deletion in Old English have been the subject of much debate in recent historical phonology. Traditional philological handbooks such as Campbell (1959) describe the process within the assumptions of the Neogrammarian tradition. As such, high vowel deletion has been described as a phonological process that removes historically high and synchronically unstressed vowels after a heavy syllable, or two light syllables. However, the descriptions in these handbooks also reveal that exceptions are common, and as per the Neogrammarian tradition, these are usually assumed to be the result of analogy. In contrast, recent studies have sought to account for the exceptions in a way that lends more explanatory power (e.g. Stratal Optimality accounts including Bermúdez-Otero 2005). Such accounts have shown that there is more to the exceptions than analogy, and that phonological rules, as their synchronic activity declines, can become entangled with other morphological and phonological conditioning, due to the high levels of surface opacity that causes them to become unlearnable.

Many of the accounts of high vowel deletion have focused on the West Saxon of Alfred (Early WS) and Ælfric (late WS), and recent descriptions of high vowel deletion have largely focused upon the noun declensions (e.g. Bermúdez-Otero in prep) and the weak verb preterites (Minkova 2012). In this study, I focus in particular upon the behaviour of high vowel deletion in the strong and weak verbs; including the past participles and both the present and preterites. The selected data represent the Early West Saxon dialect and also the Late Northumbrian dialect found in the Lindisfarne Gospel gloss. Discussion of the process as found in nouns and adjectives will also be incorporated. The study has two larger aims: 1. To provide an analysis of syncope for newly collected data sets from Early West Saxon and Lindisfarne verbs, and 2. To contribute to the debate surrounding how to account for morphophonological interaction within inflexional paradigms.

The data reveal evidence to show that high vowel deletion is indeed suffering from the demise of its original phonological conditions in the verbs. It is not argued however that full lexicalization has yet taken place throughout the verbs. Instead, the data present a range of degrees of morphologization, within which the original phonological conditions have become supplemented by additional morphological

conditions. Additional phonological conditioning is also in evidence. The Lindisfarne strong past participles, it is argued, represent a morphological category within which weight-based syncope is synchronically blocked.

The wider question of how and why morphological and phonological conditions come to be added to existing phonological processes is addressed, and I argue that such phenomena result from unsustainable levels of opacity in the grammar (Anderson 1989), and that a theoretical framework that allows for the interaction of phonology and morphology within the grammar is necessary. The Optimality Theoretic analyses proposed in this study have the benefit of accounting for instances of phonologization through constraint interaction. It is also argued that the ways in which morphological category determines a) the way in which a phonological condition applies, and b) whether it applies at all, is best analysed using cophonological analyses (Anttila 2002a etc.).

## Acknowledgements

This thesis could not have been completed without the excellent support and expertise of my supervisors, Patrick Honeybone and Linda van Bergen. I would like to thank them for always providing encouragement, help and good humour.

I am very grateful to Ricardo Bermúdez-Otero for his help in providing manuscripts and email discussions, and also Donka Minkova for sharing her work on the weak preterite with me, and for her helpful comments at the ICEHL in Munich. I would also like to thank Heinz Giegerich for meeting with me to discuss my work, and for his help with the Modern German data covered in Chapter 4. Needless to say, any errors or shortcomings in argumentation in the thesis are entirely my own.

I would also like to thank my examiners, Graeme Trousdale and Ricardo Bermúdez-Otero for their helpful comments, which have greatly improved the final version of this thesis.

I have benefited from feedback from delegates at the Manchester Phonology Meeting in 2010, the International Conference on English Historical Linguistics in 2008, the PhilSoc Language, Text and History Symposium in 2010, and also the English Language Research Group at the University of Edinburgh.

I would also like to express my gratitude to the AHRC for providing a scholarship, without which this research could not have been carried out.

Finally, I would like to thank my family and friends for their support throughout this PhD. In particular, I would like to thank Jay for letting me talk at him about rankings and data at all hours of the night, and also my mum for always being so encouraging.

I confirm that this thesis is my own work, and that it has not been submitted for any other degree except as specified. The work reported within the thesis has been carried out by me, except where due acknowledgement is made in the text.



## Contents

### PART 1: **BACKGROUND**

CHAPTER 1: Introduction	1
1.1. Organisation	2
CHAPTER 2: Old English unstressed vowel deletion: background	5
2.1. Introduction	5
2.2. High vowel deletion	6
2.2.1. HVD in strong verbs	9
2.2.1.1. Problems related to HVD in the strong verbs	12
2.2.1.1.1. Apocope and the 1 <sup>st</sup> sg.pres.ind.	12
2.2.1.1.2. Strong verbs and their relationship with syncope	17
2.2.2. HVD in nouns	18
2.2.3. HVD in adjectives	22
2.2.4. HVD in weak verbs	24
2.2.4.1. The effect of dentals upon HVS	26
2.2.4.2. HVD: The effect of sonorants upon deletion	27
2.2.4.3. Class 2 weak verbs	27
2.3. Non-high vowel syncope	29
2.3.1. Non-high vowel deletion and the strong past participle	29
2.4. Foot structure and stress in Old English	31
2.4.1. The Old English syllable	31
2.4.1.1. Sonority in the OE syllable	31
2.4.1.2. OE onsets	33
2.4.1.3. The OE rhyme	34
2.4.2. Old English feet	37
2.4.3. Stress in Old English	39
2.5. An OT account of high and non-high vowel deletion	40
2.5.1. High vowel deletion	40
2.5.2. Non-high vowel deletion	46
2.6. Recent developments	51



2.7. Chapter overview	56
CHAPTER 3: The issue of analogy: implications for the analysis	59
3.1. Introduction: the problem of analogy	59
3.2. Analogy: the historical debate	59
3.3. What is analogy?	60
3.4. Attempts to remodel analogy	63
3.5. Analogy in Old English paradigms	65
3.6. Verbs: dentals in the weak past participle	65
3.7. Nouns: apocope of non-high vowels	67
3.8. Analogy: its use in modern morphophonology	69
3.9. Recent use of analogy in Old English research	70
3.10. The Ringe (2002) account and Fulk's treatment	72
3.10.1. Analogy in Fulk's Treatment	74
3.10.2. Summary: implications for analogy	76
3.11. Albright's (2008) approach	77
3.12. Where does analogy belong?	82
3.13. Analogy and the OO-Correspondence debate	83
3.14. Conclusion: the approach that will be adopted in this study	85
CHAPTER 4: A problem for morphophonological modeling	87
4.1. Introduction	87
4.2. The life cycle of phonological processes	89
4.2.1. Introduction	89
4.2.2. Ash tensing	92
4.2.3. Finnish vowel alternations	94
4.2.4. Feminine vs. neuter in West Saxon adjectives	97
4.2.5. Section summary	101
4.3. Case study: German schwa alternations	102
4.3.1. How to incorporate morphology into this account	106
4.3.1.1. Stratal model	106
4.3.1.2. Parallel OT frameworks	109

4.4. Evidence in favour of cophonologies?	111
4.5. Variation in phonological theory	116
4.5.1. Tied violations	121
4.5.2. The multiple grammars model	125
4.5.2.1. Phonological constraining	127
4.5.2.2. Morphological constraining	129
4.5.3. Partially ordered constraints	130
4.5.4. Stochastic OT	135
4.6. Chapter summary: the framework that will be adopted in this thesis	137
CHAPTER 5: The Early West Saxon and Northumbrian data and methodology	141
5.1. Introduction	141
5.2. Old English dialectology	141
5.3. Methodology	144
5.4. Editions used in this study	145
5.5. The texts under investigation	147
5.5.1. The Lindisfarne Gospel Gloss. London, British Library, MS Cotton Nero D.iv, Ker (1957: no. 165)	147
5.6. Early West Saxon	148
5.6.1. Cura Pastoralis (Ker 1957 nos. 324, 195)	148
5.6.1.1. Oxford, Bodleian Library, MS Hatton 20 (4113), Ker (1957: no.324)	149
5.6.1.2. London, British Library, MS Cotton Tiberius B.xi, Ker (1957: no.195)	149
5.6.2. Orosius	150
5.6.3. The Parker Chronicle and Laws. Cambridge, Corpus Christi College 173, ff. 1–56 (Ker 1957: no. 39)	151
5.7. Chapter summary	151
PART 2: RESULTS, ANALYSIS AND IMPLICATIONS	153

CHAPTER 6: The indicative present verbs: high vowel deletion	155
6.1. High vowel deletion in the strong verbs	155
6.2. The Early West Saxon strong verbs	156
6.2.1. Apocope (1st sg.pres.ind.)	156
6.2.2. Syncope	157
6.2.3. Assessing the extent to which syncope is weight-driven in West Saxon verbs	157
6.3. Early West Saxon weak verbs	158
6.4. Indicative present verbs in Lindisfarne	159
6.4.1. Data from the strong indicative verbs in Lindisfarne	160
6.4.2. Apocope in the strong indicative Lindisfarne verbs	160
6.5. The weak present indicative verbs in Lindisfarne	161
6.6. Summary of the present indicative verbs	163
 CHAPTER 7: Syncope in weak verb preterites	 165
7.1. Introduction	165
7.2. Weak verbs in Early West Saxon	166
7.2.1. Historical details	166
7.2.2. Model paradigms	166
7.2.3. Class 1 weak forms: light	168
7.2.4. Class 1 weak forms: heavy	169
7.3. Weak verbs in Lindisfarne	173
7.3.1. Syncope in the Lindisfarne weak past	174
7.3.1.1. Data from Lindisfarne Class 1	174
7.3.1.4. Roots ending in dentals	177
7.3.2. Weak Class 2 forms	179
7.3.2.1. Model paradigm for Class 2	182
7.3.3. Overview of the data from Lindisfarne	184
7.4. Overview of the data from Lindisfarne and Early West Saxon	185
7.4.1. Syllable weight	185
7.4.2. Final dentals	185
7.4.3. Consonant+sonorant clusters	186

7.4.4. Formation of geminates	189
7.5. Class 2	190
7.6. Analysis and discussion of the data	191
7.6.1. The weak preterite:	
Is there any evidence for weight-based HVD?	191
7.6.2. Obstruent+sonorant cluster forms	202
7.6.3. Class 2 analysis	204
7.7. Overview	209
 CHAPTER 8: High and non-high vowel deletion in the past participle	 211
8.1. Introduction: two similar forms of deletion	211
8.1.1. Chapter organisation	213
8.2. Overview of the handbook accounts for HVS and N-HVS	214
8.2.1. High vowel deletion and the weak past participles	214
8.2.2. Non-high vowel deletion and its exceptions	215
8.2.3. Problems	216
8.3. High vowel deletion and the weak past participle in <i>-ed</i>	216
8.3.1. The uninflected weak past participles in EWS	217
8.4.1. Inflected past participles in EWS	219
8.4.1.2. The effect of t/d roots upon syncope in weak participles	221
8.5. Weak past participles in the Lindisfarne Gospels	223
8.5.1. The uninflected <i>-ed</i> participles in Lindisfarne	223
8.5.2. Inflected weak past participles: Lindisfarne	225
8.5.3. Analysis of HVS in the weak participles of EWS and Lindisfarne	226
8.5.4. Summary of the findings and analysis	235
8.6. Non-high vowel deletion and the strong <i>-en</i> forms	237
8.6.1. The original conditions for non-high vowel syncope	237
8.6.2. The EWS inflected strong past participle in <i>-en</i>	239
8.6.3. Strong past participles in <i>-en</i> in <i>Li</i> .	243
8.6.4. Analysis of the strong <i>-en</i> forms	246
8.6.4.2. Root-final stop conditioning	247

8.6.4.3. Contact and the strong <i>-en</i> forms in EWS	250
8.6.5. Flaws in the non-high vowel deletion handbook account	251
8.6.6. The demise of the prosodic conditions for non-high vowel deletion	252
8.7. Chapter summary	254
 CHAPTER 9: Implications	 257
9.1. Introduction	257
9.2. Overview of the analyses	258
9.3. High vowel syncope as a weight-based process, and the effects of morphologization	261
9.4. Non high vowel deletion and its synchronic inactivity	263
9.4.1. The status of former non-high vowel deletion forms in Lindisfarne	264
9.5. The effect of additional phonological conditions	270
9.5.1. Formation of geminates	271
9.5.2. Consonant sonorant clusters	272
9.5.3. Dental conditioning	272
9.5.4. The root-final stop conditioning	272
9.6. Traditional analogy vs. the emergence of phonology and morphology	273
 CHAPTER 10: Conclusion	 277
 Appendix A: The Present Indicative Verbs	 281
Appendix B: The Weak Preterite	319
Appendix C: The Past Participle	357
Appendix D: Lindisfarne <i>-ig</i> adjectives	403
References	407





## **CHAPTER 1**

### **Introduction**

The focus of this thesis is the behaviour of the deletion of vowels in unstressed syllables in Old English. Deletion of unstressed vowels is of interest for phonology, as it follows from prosodic motivation. However, the behaviour of such deletion in Old English is not that of a straightforward prosodic process, and I will argue, shines light upon the life cycle of phonological processes (Kiparsky 2003, Bermúdez-Otero 2005). The two types of vowel deletion that are examined in this thesis are non-high vowel deletion (N-HVD) and high vowel deletion (HVD), the former being non-weight conditioned, and the latter being sensitive to the weight of the preceding syllable. The majority of the discussion is focussed upon HVD, as it will be argued that this process retains its active phonological conditioning, while displaying the results of morphological conditioning. The treatment of N-HVD is somewhat different, and it will be argued that the original phonological conditions for the process are not in evidence, and that the process has been subject to rule death.

The intricacies and exceptions of HVD in Old English have been the subject of much debate in recent historical phonology. Traditional philological handbooks such as Wright & Wright (1925) and Campbell (1959) describe the process within the assumptions of the Neogrammarian tradition. As such, HVD has been described as a phonological process that in Prim. Old English removed historically high and synchronically unstressed vowels after a heavy syllable, or two light syllables. However, the descriptions in these handbooks also reveal that exceptions are common, and as per the Neogrammarian tradition, these are usually assumed to be the result of later analogy, which results in increased morphological regularity. In contrast, recent studies have sought to account for the exceptions in a way that lends more explanatory power (e.g. Optimality Theoretic (OT) accounts such as Hogg 2000, Stratal Optimality accounts including Bermúdez-Otero 2005). Such accounts have shown that there is more to the exceptions than analogy. They have argued that phonological rules, as their synchronic activity declines, can become entangled with other morphological and phonological conditioning. This entanglement has been claimed to be due to the high levels of surface opacity that causes the phonological



process to become unlearnable.

Many of the accounts of high vowel deletion have focused on the West Saxon of Alfred (Early WS<sup>1</sup>) and Ælfric (Late WS), and recent descriptions of HVD have largely focused upon the noun declensions (though see Minkova 2012 for an account of syncope in the Early West Saxon weak preterites). In this study, I focus upon the behaviour of HVD in the verbs of Early West Saxon (EWS) and of the Late Northumbrian Lindisfarne Gospels (*Li.*). The study has two larger aims: 1. To provide an analysis of syncope for newly collected data sets from Early West Saxon and Lindisfarne verbs, and 2. To contribute to the debate surrounding how to account for morphophonological interaction within inflexional paradigms.

### 1.1. ORGANISATION

The thesis is divided into two parts, the first of which deals with the necessary background information relating to high vowel deletion, from both a philological perspective and also with reference to more recent accounts. Part 1 also discusses the theoretical morphophonological issues that are raised by inflexional phonology, and finally, the selection of the data is discussed. Part 2 provides the data results, analyses and implications.

In Chapter 2 I provide the background information on high vowel deletion and its interaction with verb paradigms, from a traditional philological perspective. Information in relation to the history of forms, where relevant, and their synchronic behaviour will also be given. Throughout the chapter, there will be inevitable references to analogy, since that is one of the major assumptions implicit in the Neogrammarian descriptions.

Chapter 3 delves further into the issue of analogy, and aims to define firstly, what exactly is meant by philologists when they refer to an exception as ‘analogical’, and the methods that have been employed in order to constrain analogy in order to maximise its explanatory power. In the second part of the chapter, I look at some more recent definitions of analogy, before defining my use of the term in this study.

---

<sup>1</sup> Following Hogg (1988) I use capitalisation in the labels ‘Early West Saxon’ and ‘Late West Saxon’ in order to highlight that the two dialects cannot be taken merely to represent diachronic stages of West Saxon. See Chapter 5 of this thesis for further discussion.

Chapter 4 looks at the issue of how originally robust phonological processes can become conditioned by morphology. Recent descriptions of such phenomena, including Anttila's (2002a) discussion of Finnish vowel alternations, and also the competing morphophonological frameworks that have been proposed in describing such phenomena will be discussed.

Chapter 5 provides information relating to the manuscripts and editions from which the data have been extracted.

Chapter 6 begins with the results from the data for the 2<sup>nd</sup> and 3<sup>rd</sup> singular present indicative verbs in Lindisfarne and Early West Saxon. The extent to which weight-conditioned syncope is in evidence will be revealed, in addition to any evidence of additional phonological conditioning.

Chapter 7 investigates the behaviour of syncope in the weak preterites in Lindisfarne and Early West Saxon. After the data have been presented, an account will be provided, arguing that the weight-based phonological conditions are still in place, but that additional conditions have been added. In this chapter, I also discuss a recent account of high vowel deletion in weak preterites in Early West Saxon, in which it is argued that the system has become fully lexicalised (Minkova 2012).

Chapter 8 looks at the last relevant part of the verbal paradigm; the past participle. The strong past participles, which are assumed typically to be affected by N-HVD are shown to allow the effects of different phonological conditions in both Lindisfarne and EWS.

In Chapter 9 I provide an overview of the analyses and descriptions in Chapters 6–8, and discuss the implications for Old English morphophonology. This chapter also looks at the wider issues of rule decline, and why morphophonological information may become entangled with phonological conditioning.

Chapter 10 concludes the thesis, and is followed by appendices containing the data from Lindisfarne and West Saxon verbs.



## CHAPTER 2

### Old English unstressed vowel deletion: background

#### 2.1 INTRODUCTION<sup>2</sup>

Historical Linguistics is a multidisciplinary subject area, relying upon insights from theoretical linguistics, and also philology. The first few chapters will therefore devote some time to the background assumptions upon which later analyses will rely. In this chapter I will discuss the insights provided by the traditional Old English handbooks, providing an overview of their descriptions of Old English verb, noun and adjective phonology, as well as their assumptions regarding Old English phonology. The discussion focuses primarily upon HVD and N-HVD. Within historical phonology and Old English philology there are numerous debates relating to the status of Old English prosody, the behaviour of inflectional morphophonology and particularly within historical linguistics, the status of its phonological processes. Although it is not possible to delve fully into these issues, the goal of this chapter is to discuss these debates, and outline my background assumptions, upon which the later analysis will depend. In relation to inflectional OE morphophonology, this chapter focusses particularly upon the traditional handbook accounts, in the hope to ascertain which sound changes are of interest, and how they would be accounted for in a traditional Neogrammarian analysis. I will go on to discuss the implications of such analyses, though more detailed theoretical discussions are to be found in Chapters 3 and 4. Before giving an overview of the handbook treatment of verb morphophonology, it is necessary to provide the prosodic backdrop upon which these accounts are built. The prosodic discussion in Section 2.4 will consider both the observations of the traditional handbooks (Campbell 1959, Hogg 1992 etc.) and also more recent treatments. The analyses in Chapters 6, 7 and 8 will use a Stratal OT (Kiparsky 2000) framework, due to the benefits that can be brought by this

---

<sup>2</sup> In the linguistic analyses in later sections, I follow the labeling conventions found in Bermúdez-Otero (2005): Where unlabeled square brackets are used, they represent foot boundaries, e.g. *nerede* 'save' [ω[.ne.re.].de.]. In this case, the outer brackets are labeled to indicate that they depict a prosodic word, while the internal unmarked brackets represent a metrical foot. The dots represent syllable boundaries, therefore, in a case of consonant extrametricality, the form will be represented as such follows: [ω[.de.].m] 'judge'.

framework when analysing complex morphophonological interaction. More discussion of this theoretical position, in addition to discussions of alternative accounts will be given in Chapter 4. The descriptions of the basic phonological principles in this chapter will therefore be accompanied by a basic OT description, in order to maintain some continuity with the later analyses in Chapters 6–8. I will begin by outlining the processes of high vowel deletion and non-high vowel deletion. The discussion will proceed by firstly presenting the handbook descriptions of high vowel deletion and non-high vowel deletion, which will be followed by an OT account of these processes, as they are defined in the handbooks (e.g. Campbell 1959, Wright & Wright 1925). I then move beyond this basic description of the phonological processes, and examine how they are accounted for in philological handbooks, across the range of lexical classes under investigation in this study.

## 2.2. HIGH VOWEL DELETION

High vowel deletion, which is the process central to this study, targets originally high, unstressed vowels that follow either a heavy syllable or two light syllables. Both medial vowels, as in the pret. verb *hīer+ede* → *hīerde*, and also final vowels, as in the Anglian 1<sup>st</sup> sg.pres.ind. *sing+u* → *sing*, may be affected. In addition to verbs, the environments for high vowel deletion are created in nouns, e.g. *a-stem* dat.pl. *hēafod+um* → *hēafdum* ‘heads’ (syncope), and nom/acc.pl.neut. *word+u* ‘words’ → *word* (apocope), and adjectives, e.g. *a-stem* dat. *hālig+um* ‘holy’ → *hālgum*, and nom/acc.pl.neut. *blind+u* ‘blind’. Whether apocope and syncope require division into two distinct processes for the purposes of phonological analysis has been the subject of debate (see e.g. Campbell 1959, Hogg 1992, Bermúdez-Otero 2005). Following Bermúdez-Otero (2005), I assume that high vowel apocope and high vowel syncope are distinct processes. High vowel apocope, though, will not be the main focus of this thesis, as the data provide the richest alternations in terms of syncope. The handbook descriptions of apocope and syncope are as follows:

(2.1) *High Vowel Apocope*

‘*u* and *i*, whether originally short, or due to Gmc reduction of older long vowels, were lost in Prim. OE, in final unaccented syllables after a long accented syllable or a short accented syllable and another syllable...’

Campbell (1959: §345)

(2.2) *High Vowel Syncope*

‘Short *u* and *i* [...] as well as the *u* and *i*, which arose from the shortening of *ō* and *ī*, disappeared [...] in disyllabic forms when the first syllable was long, but remained when the first syllable was short.’

(Wright & Wright 1925: §215)

Apocope and syncope are therefore expected to leave unstressed short vowels unaffected if they follow a short root syllable. Additionally, Campbell (1959: §347) states that when *i* or *u* of a second syllable is followed by a consonant it will not be deleted, i.e. high vowel syncope only affects the vowels of open syllables. The typical alternations are as follows:

(2.3) *Apocope*

	<i>singan</i> ‘sing’	<i>beran</i> ‘bear’
1 <sup>st</sup> sg.pres.ind. - <i>u</i> <sup>3</sup>	sing+u	ber+u
	↓	↓
Apocope:	sing ∅	—
	↓	↓
Output:	<i>Ic sing</i> ‘I sing’	<i>Ic beru</i> ‘I bear’

---

<sup>3</sup> This suffix is found in non-West Saxon dialects. The West Saxon 1<sup>st</sup> sg.pres.ind -*e* is not subject to apocope.

## (2.4) Syncope

	<i>hīeran</i> ‘hear’	<i>herian</i> ‘praise’
pret.sg. -ede:	<i>hīer+ede</i>	<i>her+ede</i>
	↓	↓
Syncope:	<i>hīerØde</i>	—
	↓	↓
Output:	<i>hīerde</i> ‘heard’	<i>herede</i> ‘praised’

Since HVD is expected only to apply to historically high vowels, the relevant lexical classes are as follows:

## (2.5) Syncope:

### (a) Verbs:

Weak preterites of Class 1:	<i>hīer+ede</i> → <i>hīerde</i>
Weak inflected past participles of Class 1:	Dat. <i>hīer+ede+um</i> → <i>hīerdum</i>
Strong and weak 2 <sup>nd</sup> /3 <sup>rd</sup> .pres.ind.sg.:	<i>sing+est/-eð</i> → <i>singst/singð</i>

### (b) Nouns:

Strong inflected <i>a</i> -stem disyllabic nouns:	Dat.pl. <i>hēafod+um</i> → <i>hēafdum</i>
---	---

### (c) Adjectives:

Strong inflected <i>a/ō</i> -stem disyllabic adjectives:	Dat. <i>hālig+um</i> → <i>hālgum</i>
--	--------------------------------------

## (2.6) Apocope:

### (a) Verbs:

Strong Class I, II, III, VII verbs in the 1 <sup>st</sup> sg.pres.ind.:	<sup>4</sup> <i>sing+u</i> → <i>sing</i>
--	---

### (b) Nouns:

Strong <i>a</i> -stem nom/acc.pl.neut.:	<i>word+u</i> → <i>word</i>
Strong <i>ō</i> -stem nom.sg.fem.:	<i>lār+u</i> ‘learning’ → <i>lār</i>

---

<sup>4</sup> West Saxon, however, is not expected to be affected due to the -e suffix.

(c) Adjectives:

Strong *a*-stem nom/acc.pl.neut.      *blind+u* → *blind*

Strong *ō*-stem nom.sg.fem.:      *blind+u* → *blind*

In Sections (2.2.1–2.2.4.3) we will see that the outcome of regular HVD, as outlined above, is not attested in the dialects under consideration.

### 2.2.1. HVD in strong verbs

In this section I will present the model paradigms for the strong verbs as found in the handbooks and focus on the parts of the paradigms in which HVD is expected, before moving onto discussion of the exceptions noted in the traditional grammars and their treatment of them. When referring to the strong verb classes, I follow the convention of using Roman numerals, e.g. Class III etc.

The model paradigms shown throughout this section are adapted from those presented in Campbell (1959) and Wright & Wright (1925), and focus upon the outcome of HVD. The Old English strong verbs are divided into seven classes, each with their own ablaut gradation series. The seven strong verb classes stem from the primary Indo European ablaut, including the *e*-grade present, *o*-grade perfect, and zero-grade aorist (Lass 1994: 153). The vowel ablaut in the preterite and past participle is not relevant to HVD, as the root vowels are unchanged from that found in the infinitive in the two cases in which HVD applies: the 1<sup>st</sup> sg.pres.ind. (apocope) and the 2<sup>nd</sup>/3<sup>rd</sup> sg.pres.ind. (syncope). Therefore, the seven classes need only be divided into two groups for our purposes: those with heavy root syllables containing either a coda cluster or a long vowel, and those in which the root syllable is light:



## (2.7) Strong verbs and HVD

(a)

Heavy classes	Inf.
<b>Class I</b> 'shine'	<i>scīnan</i>
<b>Class II</b> 'creep' 'use'	<i>crēopan,</i> <i>brūcan</i>
<b>Class III</b> 'sing'	<i>singan</i>
<b>Class VII</b> 'hold' 'command' 'grow'	<i>healdan</i> <i>hātan</i> <i>grōwan</i>

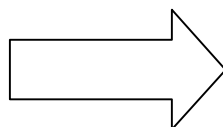


Apocope expected in the  
*Li.* 1<sup>st</sup> sg.pres.ind.

Syncope 'expected' in  
the WS and *Li.* 2<sup>nd</sup>/3<sup>rd</sup>  
sg.pres.ind.

(b)

Light classes	Inf.
<b>Class IV</b> 'bear'	<i>beran</i>
<b>Class V</b> 'tread'	<i>tredan</i>
<b>Class VI</b> 'journey'	<i>faran</i>



No apocope expected in  
the *Li.* 1<sup>st</sup> sg.pres.ind.

No syncope 'expected'  
in the WS and *Li.* 2<sup>nd</sup>/3<sup>rd</sup>  
sg.pres.ind.

Since the individual classes are not found to influence the outcome of deletion, I will use the Class I *scīnan* to represent heavy strong forms throughout this chapter, and will use Class IV *beran* for the lights.

## (2.8) Model strong paradigm

Inf.	<i>beran</i>	<i>scīnan</i>
	'bear'	'shine'
1 <sup>st</sup> sg. Pres. ind. (NWS) -u	<i>beru/bero</i>	<i>scīn</i> * <i>scīnu</i> (WS <i>scīne</i> )
2 <sup>nd</sup> sg.pres.ind.	<i>bir(e)st</i>	<i>scīnst</i>
3 <sup>rd</sup> sg.pres.ind.	<i>bir(e)ð</i>	<i>scīnð</i>

The handbooks note, however, that many exceptions to these model paradigms exist. Wright & Wright (1925: §475) indicate, for example, that the light strong forms are liable to undergo syncope variably, as indicated in *bir(e)st*. Additionally, they note that in Anglian syncope is rarely attested. In terms of apocope in the 1<sup>st</sup> sg.pres.ind., the West Saxon forms are immune due to the *-e* non-apocopating suffix, but in Anglian dialects, Wright & Wright (1925: §476), and Campbell (1959: §731.1) assume that although the *-u/-o* was regularly lost after heavy syllables, by the time of Prehistoric OE the verbs with long roots regained the *-u* suffix e.g. *Li. drīfo* ‘drive’, *delfo* ‘delve’, *drinco* ‘drink’. This, they assume, is due to analogy with the short forms. The attested paradigms are therefore as follows:

(2.9) *West Saxon attested paradigm*

Inf.	<i>beran</i>	<i>scīnan</i>
	‘bear’	‘shine’
1 <sup>st</sup> sg.pres.ind.	<i>bere</i>	<i>scīne</i>
2 <sup>nd</sup> sg.pres.ind.	<i>birst</i>	<i>scīnst</i>
3 <sup>rd</sup> sg.pres.ind.	<i>birð</i>	<i>scīnð</i>

(2.10) *Northumbrian attested paradigm*

Inf.	<i>beran</i>	<i>scīnan</i>
	‘bear’	‘shine’
1 <sup>st</sup> sg.pres.ind. (NWS) <i>-u</i>	<i>beru/bero</i>	<i>scīnu/scīno</i>
2 <sup>nd</sup> sg.pres.ind.	<i>birest</i>	<i>scīnest</i>
3 <sup>rd</sup> sg.pres.ind.	<i>bireð</i>	<i>scīneð</i>

Two problems require further discussion. The first of these is the lack of apocope even in Northumbrian in the 1<sup>st</sup> sg.pres.ind.. Secondly, the 2<sup>nd</sup>/3<sup>rd</sup> sg.pres.ind. inflexion itself does not truly present the conditions for syncope as outlined in the handbooks, since the syllable within which the historical *-i-* falls is closed: [ω[.ʃi:.].nəθ.]. These problems will be discussed further in Section 2.2.1.1.

### 2.2.1.1. Problems related to HVD in the strong verbs

#### 2.2.1.1.1. Apocope and the 1<sup>st</sup> sg.pres.ind.

The 1<sup>st</sup> sg.pres.ind. appears in two forms: *-e/æ* found in West Saxon, and *o/u*, which is found in non-West Saxon. The non-West Saxon 1<sup>st</sup> sg.pres.ind. *-u* (*-o*) creates the conditions for apocope to apply when it is attached to certain forms. On the other hand, the mainly West Saxon *-e* must be from non-high Prim. OE *-æ* (Campbell 1959: §735). The *-e* suffix is prevalent in West Saxon, with the only early exception being in the Cura Pastoralis: *cweðo* ‘say’. For this reason, the West Saxon verbs are not relevant as far as apocope is concerned. This suffix has a different source from the one facing HVD, and I will argue in later sections that it is not the synchronic vowel height that protects the vowel from deletion, but a morphological condition, i.e. the 1<sup>st</sup> sg.pres.ind. is not at the domain of apocope in WS.

In late Northumbrian, *-o* is the most common 1<sup>st</sup> sg.pres.ind. suffix with *-a* being frequent, and also *-u* and *-e* occurring. Campbell states this agrees fairly well with the state of unaccented vowels in Northumbrian (see Campbell 1959: fn §379). Ross (1937: 33) lists the statistical distribution of these suffix variations in the Lindisfarne Gospels:

#### (2.11) Statistical distribution of suffixes in Li.

1 <sup>st</sup> sg.pres.ind.:	total	%a	%e	%o
(weak and strong)	360	2.5	2.2	95.3

Ross (1937: 33)

The 1<sup>st</sup> sg.pres.ind. and its relationship with apocope has been discussed in Suzuki (1988). His study focusses upon the Vespasian Psalter (henceforth *VP*) and also considers West Saxon. The Mercian dialect of the *VP* exhibits some similarities to the Lindisfarne Gospels in terms of the apocope in the 1<sup>st</sup> sg.pres.ind., in that failure to delete is the norm, whether the root syllable is light or heavy. In a study by Keyser & O’Neil (1983), the failure of *-u* to delete in *VP* has been argued not to represent

the weakness of HVD, but instead the immunity of the *-u* suffix, which, they argue, was *-o* at the time of HVD, and therefore should never have been deleted in the first place. In contrast, they argue, the *-u* of the nom/acc.pl.neut. in nouns was *u-* at the time of apocope, and therefore, it is deleted as expected. Suzuki argues against this account with evidence suggesting that the Mercian 1<sup>st</sup> sg.pres.ind. *-u* was unlikely to be *-o* at the time of HVD. The source of the debate surrounding the historical status of *VP* 1<sup>st</sup> sg.pres.ind. *-u* comes from the orthographic variation between *-u* and *-o* within the text. On the other hand, this variation does not exist in relation to the apocope-sensitive nom/acc.pl.neut. *-u*. The argument put forward by Keyser & O’Neil (1983) is exemplified in the following diagram:

(2.12)

	Verb <i>haldan</i> ‘hold’	Noun <i>word</i> ‘word’
Inflexion:	<i>hald+o</i>	<i>word+u</i>
	↓	↓
Apocope:	—	<i>word</i> ∅
	↓	↓
Raising:	<i>haldu</i>	—
	↓	↓
Output:	<i>haldu</i>	<i>word</i>

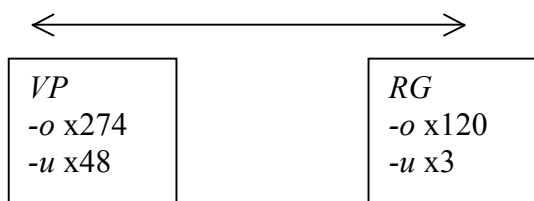
Adapted from Keyser & O’Neil (1983: 152)

This account logically implies that the 1<sup>st</sup> sg.pres.ind. suffix in *-o* is the older form, and that raising is a variable process, hence the orthographic variation within the *VP*. Suzuki suggests, therefore, that the raised variant, *-u*, may be expected to be more common in later texts. However, Suzuki (1988: 213) claims that evidence from the later Rushworth Gospels (*RG*) suggests that this is not the case:

(2.13) *Distribution of -o and -u in the 1<sup>st</sup> sg.pres.ind.*

9<sup>th</sup> Century

10<sup>th</sup> Century



Numbers from Suzuki (1988: 213)

Suzuki argues that these data suggest that -o is the innovative variant. Thus, it is likely that -u was in place at the time of HVD. Also problematic for the Keyser & O'Neil (1983) analysis is that other grammatical endings such as the nom.sg.fem. are involved in the u/o discrepancy, but are also subject to HVD (Suzuki 1988: 14). In contrast to the raising account presented by Keyser & O'Neil (1983), Suzuki assumes that a lowering process similar to that which affected the noun *hēafod* (older *hēafud*), which itself still undergoes HVD, has caused the -o variant to exist in the Mercian 1<sup>st</sup> sg.pres.ind.. However, the fact that the inflexional nom/acc.pl.neut. -u was not affected while the verbal affix was, leads Suzuki to suggest that morphological factors must be taken into consideration, and that a purely phonological account is unsatisfactory (Suzuki 1988: 215). Suzuki also considers the state of affairs in other West Germanic languages and also in other dialects of OE. Interestingly, the varieties broadly fit into the following two categories:

(2.14)

Group A

Group B

<p><b>1<sup>st</sup> sg.pres.ind. -u</b>  Resistant to apocope:  <i>Anglian OE</i>  <i>Old High German</i></p>	<p><b>1<sup>st</sup> sg.pres.ind. -e</b>  No apocope:  <i>West Saxon</i>  <i>Old Frisian</i></p>
--	--

Suzuki (1988: 217) is concerned with the following questions:

- Why was -u was lost and replaced with the subjunctive marker -e in the varieties of Group B?
- Why did the verbs in Group A exhibit underapplication of apocope, rather than overapplication?

- c) Why is exceptionality of apocope limited to the verbs, and not, for example, the nom/acc.pl.neut. nouns?
- d) What is the explanation for the cross-dialectal nature of this exceptionality?

In answer to a), Suzuki claims that the addition of the subjunctive *-e* followed actually from *overapplication*, rather than underapplication of HVD. The hypothesis is that the original *-u* exhibited deletion whether the root syllable was light or heavy. This then left the opening for the novel suffix to attach. There are many benefits to this account of the rise of *-e*. For example, as Suzuki points out, West Saxon exhibits almost obligatory syncopation in the 2<sup>nd</sup>/3<sup>rd</sup> sg.pres.ind. of the strong verbs. This, he claims, is an analogical relationship, which can be exemplified using the following light example, which should not be expected to undergo either apocope or syncope:

(2.15)

*beran* ‘to bear’

*bir+est* : *birst* = *bir+u* : X

X = *bir*

This analogical explanation does, however, leave some questions unanswered, such as why the overapplication in the 2<sup>nd</sup>/3<sup>rd</sup> sg.pres.ind., which is the basis for analogy in this explanation occurs. An alternative explanation may have the benefit of bringing together the account for Group A and Group B. The alternative account, similarly to Suzuki’s, has a morphological basis with the main point being the assumption that the strong verb paradigm itself is not subject to the weight conditions for HVD (see Chapter 9). We will see, in Chapter 6, that the strong verb paradigm exhibits no statistically significant weight condition for syncope in the 2<sup>nd</sup>/3<sup>rd</sup> sg.pres.ind. in either Lindisfarne or West Saxon. While the former has underapplication of syncope, and the latter has overapplication, they have in common that HVD is not phonologically motivated. Therefore, not only does apocope in strong verbs fail to show normal application in both dialects, but also syncope. Therefore, I assume that the strong paradigm has become immune to HVD, mainly due to the poverty of information from which a learner could construct the

phonological process. In other words, the strong paradigm presents far fewer possible environments for HVD than the weak paradigm or the nouns, since a) the strong past participles are not subject to HVD due to the historically non-high suffix, *-en*, b) unlike the weak verbs, the ablaut system does not present the conditions for HVD in the preterite. This account also goes some way towards answering questions (b–c) above, as the immunity to HVD in the strong paradigm would naturally cause underapplication (see Section 2.2.1.1.2 of this chapter for discussion of the overapplication of 2<sup>nd</sup>/3<sup>rd</sup> sg.pres.ind. syncope, and also Chapter 9 for discussion of and any light that it may shine on apocope in the 1<sup>st</sup> sg.pres.ind. in West Saxon). The lack of possible HVD environments in the strong paradigm also explains resistance to the process cross-dialectally (question d), and also why this is not the case in nouns and adjectives (question c).

Suzuki's claim, in contrast, is that the *-u* ending was analogically restored in Anglian after a long syllable on the morpho-syntactic generalisation that verbal endings lost their final vowels only when followed by vowel initiating enclitics. Otherwise they surfaced as fully spelled. Suzuki's (1988) study shines light on the problem of the 1<sup>st</sup> sg.pres.ind., and makes a compelling argument, based on data from *Ru<sup>l</sup>* and *VP*, that it is unlikely that the suffix in question historically failed to fulfil the requirements for HVD, later undergoing raising. The analogical nature of Suzuki's account follows but expands upon that found in the handbooks, and he rightly notes that the handbook description in terms of analogy is too vague. However, I argue that the immunity to weight-conditioned HVD in the strong paradigm is wider; affecting all dialects, and that it can be explained in greater detail once we compare it to the weak paradigm, and consider both high vowel syncope and high vowel apocope. I will now move onto syncope in the strong 2<sup>nd</sup>/3<sup>rd</sup> sg.pres.ind.

#### 2.2.1.1.2. Strong verbs and their relationship with syncope

The strong verb paradigm presents only one environment for high vowel syncope; the 2<sup>nd</sup>/3<sup>rd</sup> sg.pres.ind., though this itself is controversial.<sup>5</sup> As stated above, syncope is expected to remove short high vowels that are in unstressed light syllables preceded by a stressed heavy syllable. The 2<sup>nd</sup> and 3<sup>rd</sup> sg.pres.ind. endings are derived from Gmc *-isi*, *-ipi* (Campbell 1959: §732), and are therefore target vowels for HVD due to their historic height. However, as noted above, whether heavy or light, any verb taking the 2<sup>nd</sup>/3<sup>rd</sup> sg.pres.ind, such as *scīn+eð* [ω[.fī:].nəθ.], presents a target vowel that is within a closed syllable, and as stated in Campbell (1959: §347), the vowels of closed syllables are not expected to be targeted by syncope. As raised in the previous section, the evidence for HVD in the strong paradigm is scant, since in addition to one apocoping suffix, the only other environment does not truly fulfil the conditions in the first place. Although the data from this thesis show the strong paradigm to be devoid of weight conditioning, it is the case that in WS, it is prolific overapplication that is attested. Thus, light and heavy syllables lose the medial vowel, which is itself within a closed syllable.

According to the handbooks, in West Saxon there is generally syncope of *-i-* and consequent assimilation of consonants and simplification of double consonants. Wright & Wright (1925: §476) state that syncope applies regularly after long stems like *hilpst*, *hilpð* ‘helps’, *ritst* ‘rides’ etc. and fails, as expected, after short stems such as *birets* (*birst*) ‘bears’, *færest* ‘journeys’. However, they note that numerous exceptions exist, particularly in West Saxon and Kentish, due to ‘new formations in both directions’ e.g. syncope after short stems such as *birst*, *birð*, *faerst*, *faereð* and unsyncope after long stems like *bindest*, *hilpest*. In West Saxon and Kentish syncope is almost general, especially after voiceless consonants and after [d], [f] and [g], but usually not after a single liquid or a nasal (Campbell 1959: §751). The effect that sonority has upon syncope will be considered. In Anglian the forms without syncope were generalised. There is therefore virtually never syncope in Northumbrian, and the mutation of the vowel is ‘levelled away’ e.g. *falleð*, *eteð* (Campbell 1959: §752).

---

<sup>5</sup> The syncope seen in the strong past participles in *-en* is not HVD, but a separate process of Non-High Vowel Deletion. This will be discussed in its own right in Section (2.3).



In contrast to Northumbrian, the rate of syncope failure in EWS is very low; averaging at approximately ten per cent, whether heavy or light (see Appendix A).

The problem of why syncope proceeds at all has been discussed in recent handbooks. For example, Hogg and Fulk (2011: §6.14) propose that syncope may have originally only applied in phrases in which a pronoun followed the 2<sup>nd</sup>/3<sup>rd</sup> sg.pres.ind. verb, e.g. *bindið hē* ‘he binds’. In the second person, such forms could become lexicalised, as in *cuoeðestu* ‘you say’, *brūcis ðu* ‘you enjoy’ (Hogg & Fulk 2011: §6.14). The simplification of the onset + *-est* coda into /stu/ would, by onset maximisation, cause the target vowel to be in an open syllable: [ω[.kwæ.ðe].stu.], though in *cuoeðestu* the form is light, and so deletion should not be expected despite the open syllable. According to Luick (1922: 196–7), *bindið hē* would have been pronounced as *bindiðē*, which would provide a target unfooted medial vowel in an open syllable.

### 2.2.2. HVD in nouns

The nouns have not been examined in this study, though since much of the literature on HVD focusses upon nouns, it is necessary to provide the background on how the process affects the nominal paradigms. The *a*- and *ō*-stem nouns present the conditions for high vowel deletion. The model paradigms presented in Campbell (1959: §570) are as follows:

#### (2.16) *Monosyllabic forms (apocope)*

(a) *a*-stem:

	Neuter	
	<i>scip</i> ‘ship’	<i>word</i> ‘word’
Sg.		
Nom.	scip	word
Acc.	scip	word
Gen.	scipes	wordes
Dat.	scipe	worde

Pl.		
Nom.	scipu	word
Acc.	scipu	word
Gen.	scipa	worda
Dat.	scipum	wordum

(b) *ō*- stem

	Feminine	
	<i>giefu</i> ‘gift’	<i>lār</i> ‘learning’
Sg.		
Nom.	giefu	lār
Acc.	giefe	lāre
Gen.	giefe	lāre
Dat.	giefe	lāre

Pl.		
Nom.	giefa (-e NWS)	lāra (-e NWS)
Acc.	giefa, -e	lāra, -e
Gen.	giefa, -ena	lāra
Dat.	giefum	lārum

For the monosyllabic forms, it is only the nom.sg.fem. and the nom/acc.pl.neut. that present an apocope-sensitive ending. The model paradigm is built on the assumption that heavy forms will face apocope, with light forms remaining unaffected, as per the traditional description of HVD. The following paradigms are more complex, and present the conditions for apocope and syncope. The neuter forms with stems ending in obstruant+sonorant clusters, such as *tungol* ‘star’ and *wæter* ‘water’, are assumed in Campbell (1959: §574.3) to show a parasite vowel that breaks up the cluster in uninflected forms: *tungol*. They are not underlyingly disyllabic, and so are not subject to syncope: the inflected forms such as *tungles* simply show the lack of the parasite vowel, which is not required to break up the cluster since it can be split between two syllables. The fact that this is not syncope is demonstrated by the fact

that the vowel is absent from inflected forms whether heavy, as in *tungles*, or light, as in *wætres*. For the purposes of apocope, both types are heavy since they contain a consonant cluster. Therefore apocope is expected in the nom/acc.pl.neut in *wæter* and in *tungol*. In contrast, *hēafod* and *werod* are originally polysyllabic, and have a historically high medial vowel that may be subject to deletion, depending on syllable weight. For example, *hēafod* comes from Gmc. *\*hauþud̥*, the medial vowel having since undergone lowering. Since *werod* contains two light syllables, it counts as heavy as far as apocope is concerned: *werodu* → *werod*. However, since the first syllable is light, syncope is not triggered, since the medial vowel does not follow a heavy syllable: *werodum* *\*werdum*.

## (2.17) Polysyllabic neuter forms (syncope & apocope)

### Neuter *a*-stem

	<i>tungol</i> ‘star’	<i>wæter</i> ‘water’	<i>hēafod</i> ‘head’	<i>werod</i> ‘troop’
Sg.				
Nom.	tungol	wæter	hēafod	werod
Acc.	tungol	wæter	hēafod	werod
Gen.	tungles	wætres	hēafdes	werodes
Dat.	tungle	wætre	hēafde	werode
Pl.				
Nom.	tungol	wæter	hēafdu	werod
Acc.	tungol	wæter	hēafdu	werod
Gen.	tungla	wætra	hēafda	weroda
Dat.	tunglum	wætrum	hēafdum	werodum

These paradigms assume that HVD applies in the nouns in a regular manner, though Campbell (1959) goes on to describe numerous exceptions, many of which have been examined in the literature (e.g. Hogg 2000, Bermúdez-Otero 2005 etc.). Notable exceptions include:

- a) The failure of apocope in *tungol* and *wæter* types, which Campbell (1959: §574.3) assumes show the results of analogical restoration. In the *tungol* types, the parasite vowel will usually be absent in such forms: *tunglu*, while in the *wæter* types, the parasite vowel is frequently retained: e.g. *wæteru*. The retention of this parasite has been examined in Bermúdez-Otero (2005), in which it is argued that it is in fact a process of syllable contact repair, in which syllable boundaries with a rising sonority contour are penalised (Venneman 1988).
- b) The overapplication of apocope in *hēafod*, together with lack of syncope: nom/acc.pl.neut. *hēafod*, and the underapplication of apocope in *werod* types: *werodu*. Overapplication of syncope in *werod* types is not attested, however.
- c) Additionally, trisyllabic forms such as *hēafodu* are attested, in which both types of HVD fail. Although both types can fail, both forms of deletion never apply at the same time: *\*hēafd*. The phonological reasons behind the choice between syncope and apocope, and the reasons for their exclusivity will be examined within an OT framework in Section 2.5 of this chapter.

All of these forms of exceptional behaviour are described in Campbell (1959) within a traditional Neogrammarian framework, and analogy is held responsible for exceptions to the phonological rule. As raised in the above discussion of Suzuki (1988), the analogy explanation pursued in traditional handbooks is of a vague nature, without much discussion of the exact nature of the analogical relationship. One final noun type has a feature that will become relevant in the following discussion of Old English weak verbs, that is, disyllabic nouns in which the medial vowel is part of a derivational affix and was historically high, but accented. Such forms are immune to apocope and syncope (Campbell 1959: §574.6), e.g. *nīeten* ‘beast’ nom/acc.pl.neut. *nīetenu*, dat.pl. *nīetenum* *\*nīetnum*, *nīetnu*. The historically accented vowel is protected from deletion regularly in West Saxon, though in Lindisfarne, syncope forms can also be found.

### 2.2.3. HVD in adjectives

The adjectives share many of the features of the nouns described above, and also present some of their own complications. Adjectives decline as strong when determiners are absent from the noun phrase, and as weak when following a determiner. Also, they follow the gender and case of the noun that they modify. As with the nouns, the adjectives have not been examined extensively as part of this study, though Appendix D contains some adjectival data relevant to the processes found in the weak and strong verbs (see Chapter 9, and Appendix D for more details). This section will examine the problems presented by adjectives, and provide an overview of the adjectival inflexions. Although the past participles also take adjectival inflexions, they will be discussed separately in Section 2.3.1 for the strong past participles, and in Section 2.2.4 for the weak participles. Though both weak and strong past participles take these adjectival inflexions, it is only the weak past participle that contains a thematic vowel that is subject to HVD. The strong past participle, in *-en* is from a different source, and will be discussed in Section 2.3, which focusses on non-high vowel deletion. Since N-HVD is not weight conditioned, inflected strong past participles do not behave like their adjectival counterparts.

Similarly to the *scip* and *word* classes, the light and heavy monosyllabic adjectives alternate according to the apocope of the nom/acc.pl.neut. vowel: e.g. nom/acc.pl.neut. *tilu* ‘good’, *blind* ‘blind’. The *wæter* types are comparable to adjectives like *fæger* ‘fair’. Campbell uses the form *hālig* ‘holy’ to exemplify the adjectival equivalent to the *hēafod* nouns, as it is underlyingly disyllabic. The model paradigms are as follows (Campbell 1959: §639–§643):

(2.18)

Neuter

*hlūtor* ‘pure’ *fæger* ‘fair’ *hālig* ‘holy’ *arod* ‘bold’

Sg.

Nom.	hlūtor	fæger	hālig	arod
Acc.	hlūtor	fæger	hālig	arod
Gen.	hlūtres	fægres	hālgēs	arodes
Dat.	hlūtrum	fægum	hālgum	arodum

Pl.

Nom.	hlūtor	fæger	hāligu	arod
Acc.	hlūtor	fæger	hāligu	arod
Gen.	hlūtorra	fægerra	hāligra	arodra
Dat.	hlūtrum	fægum	hālgum	arodum

As with the nouns, Campbell describes the failure of syncope that occurs in *hālig* types as analogical ‘restoration’ (Campbell 1959: §643.5). Campbell (1959: §352) comments that syncope is uncommon before consonant groups, citing examples such as nouns and adjectives ending in *-isc*, *-iht*, and *-est*. However, a purely phonological account for this lack of syncope may not be sufficient. There are counterexamples to this phonological generalisation in West Saxon, including superlatives (Campbell 1959: §352) e.g. *gingsta*, *strengsta* etc. Also, in addition to the phonological properties of the consonant clusters, these examples of non-syncope have in common that they contain derivational affixes. This feature of non-syncope is also shared by certain derivational affixes that do not contain such a cluster, such as *-en* in the nouns and adjectives. Thus, although *gylden* ‘gold’ is listed as a *hālig* type in Campbell (1959: §644.b), it corresponds to the *nīeten* type in nouns, rejecting HVD in West Saxon.

In the *hālig* model paradigm, Campbell (1959) shows failure of apocope and syncope in the nom/acc.pl.neut. which, although occurring in the nouns in the corresponding *hēafod* type, would be ‘unexpected’ in the nouns. For more discussion of the failure of syncope in adjectives see Section 2.6. There are additional problems with *hālig*, since it contains a derivational affix: *-ig*. This affix has two historical roots, one was long, high, and accented, while the other was short. To add further complications, the short affix was non-high. It is certainly the case that *hālig* types undergo HVD synchronically in OE, though the process is highly irregular, and the historical basis for the deletion is complex, due to the derivational affix.

#### 2.2.4. HVD in weak verbs

In this section I will introduce the main weak verb classes in Old English, considering their historical origins and the effect this has had upon the sound changes and misapplications of sound changes that provide problems for the analyst.

In Old English the thematic/athematic distinction of Class 1 verbs, according to Lass (1994: 165) was determined by syllable weight in the root, with high vowel syncope deleting high vowels after heavy syllables. In weak verbs, the weak root + thematic vowel forms the stem, with inflectional endings being added on top. In the case of Class 1, the thematic vowel was *-i-*, which would therefore be subject to syncope after heavy syllables. The model Class 1 weak paradigm is shown in (2.19) (Campbell 1959: §748). The dative past participle has been used to represent past participles taking vowel-initial inflexions, in order to show where syncope is expected. Forms relevant to HVD have been indicated in the paradigm using boxes:

#### (2.19) Class 1 West Saxon paradigm

	<i>do</i>	<i>praise</i>	<i>hear</i>
	fremman	herian	hīeran
Pres ind.			
Sg.			
1 <sup>st</sup>	fremme	herie	hīere
2 <sup>nd</sup>	frem(e)st	herest	hīerst
3 <sup>rd</sup>	frem(e)þ	hereþ	hīerþ
Pl.	fremmaþ	heriaþ	hīeraþ

	<i>do</i>	<i>praise</i>	<i>hear</i>
	fremman	herian	hīeran
Past ind.			
Sg.			
1 <sup>st</sup>	fremede	herede	hīerde
2 <sup>nd</sup>	fremedest	heredestt	hīerdest
3 <sup>rd</sup>	fremede	herede	hīerde
Pl.	fremedon	heredon	hīerdon
Past Part.	fremed	hered	hīered
Dat. Past Part.	fremedum	heredum	hīerdum

Historically, the *-i-* that appeared before the endings was vocalic after long syllables ending with a consonant, and was the consonantal *-j-* after short syllables. This *-j-* caused consonant doubling, affecting all consonants except */r/* (Campbell 1959: §407). The effects of West Germanic Gemination (WGG) can be seen in the *fremman* type, and the thematic vowel in the preterite and past participle appears in place of the geminate that appears in the infinitive, the 1<sup>st</sup> sg.pres.ind., and the pres.pl.. Therefore, following Campbell (1959) I assume that for the purposes of deletion in the weak preterite, the *fremman* type is synchronically light, in contrast to forms in which an original geminate exists. In the present system, the *-i-/j-* is subject to high vowel deletion in the 2<sup>nd</sup>/3<sup>rd</sup> sg.pres.ind. after both old long closed syllables, and also variably after short syllables made long by WGG, but remains undeleted after short syllables. In the weak preterite, the stem formative *-e-* is expected to be deleted according to the weight conditions for HVD: *hīerde* \**hīerede*. The stem formative for the past participle is also subject to HVD, and is only expected to show syncope when taking the adjectival inflexions. The situation shown in the model paradigm is over simplified, and as with the previous lexical classes discussed, the handbooks note many ‘analogical’ exceptions. I will now deal with these in turn.



#### 2.2.4.1. The effect of dentals upon HVS

The behavior of syncope in the past.part. is potentially of great interest. The past participle should have syncope of *-i-* in open syllables after long root syllables in trisyllabic forms: e.g. *gesende* ‘sent’. This is the case in, for example, the Vespasian Psalter and in Lindisfarne, but in West Saxon, in addition to forms such as *gesende* showing ‘normal’ application of deletion, syncope is extended to uninflected forms which end in a dental e.g. *gehȳd* ‘hide’ next to *gehȳded*, and to closed medial syllables in inflected forms e.g. acc.sg.masc. *gesende* ‘send’ Inf. *sendan*. In addition to this overapplication, there is a similarly phonologically conditioned tendency to underapply: participles which do not end in dentals often level out the unsyncopeated form to inflected cases e.g. *geliefede* ‘believed’ (Campbell 1959: §752, Hogg 1992: §624.2). Campbell assumes this to be an analogical process. However, it is worth asking the question of why the morphological process of analogy would be behaving in an apparently phonologically conditioned manner, resulting in both under- and overapplication within the same paradigm. This problem with analogy as an explanation will be examined in more detail in Chapter 3. It may be the case that the weak Class 1 past.parts. provide evidence for a change in the phonological conditions of syncope, with the features [+anterior], [+coronal], [-continuant] (i.e. dental) becoming associated with deletion, rather than simply the original prosodic conditions. This results in a greater instance of syncope failure in stems lacking the dental. If this is the case, it may also be true that the prosodic conditions themselves are becoming weaker, or removed, as examples such as unsyncopeated *geliefede* have undergone no repair of the unfooted syllables which high vowel deletion seeks to remove.

*Ru'* usually follows the phonological rule according to Campbell (1959), distinguishing *gehēred*, Pl. *gehērde* ‘heard’, *sended*, *sende* ‘send’, even after dentals, indicating that the prosodic conditions have not had segment-specific conditions added to them. In Northumbrian, the uninflected form always appears as *-ed*, remaining unsyncopeated. Syncope often fails in inflected forms, particularly in the Lindisfarne Gospels e.g. *gefylledo* ‘fell’. In Chapter 7 and 8, the weak preterites and

weak past participles have been examined in order to assess the extent of syncope overapplication in the instance of dentals.

#### 2.2.4.2. HVD: The effect of sonorants upon deletion

Across nouns, adjectives and verbs, there is a relationship between the sonority levels or final consonants and high vowel deletion. Sonority also appears to have an effect upon medial vowel epenthesis, which will be discussed in more detail in Chapter 4 in relation to Modern German. According to the handbooks (Campbell 1959: §751), West Saxon exhibits syncope most of the time in the 2<sup>nd</sup> and 3<sup>rd</sup> sg.pres.ind., particularly after voiceless consonants, which are low on the sonority scale, and after [d], [f] and [g], but usually not after a single liquid or a nasal. Additionally, according to Campbell (1959: §753.2) this relationship carries into the past tense of West Saxon Class 1 weak verbs e.g. *timbrede*, with syncope being uncommon. In the case of *timbrede*, phonotactics may be responsible for this lack of syncope, as the resulting form would not be permitted: *\*timbrde* (see Chapter 7, and also Minkova 2012 for further discussion of *timbran*).

#### 2.2.4.3. Class 2 weak verbs

The Class 2 verbs historically have a thematic \*/o:~/. In some dialects the endings attached directly to thematic /o:/ and in others there was a post-theme in \*/-j-/, e.g. OHG *salb-ōn* ‘anoint’, OE *sealf-ian* \*/salβ-o:j-an/. In OE the infinitive is *-ian*. The endings are different from Class 1, reflecting the back vowel theme. The theme blocks *i*-umlaut even if /j/ follows (Lass 1994: 168). Verbs of this class, unlike those of Class 1, may therefore have a back root vowel. Below is the model paradigm for West Saxon weak Class 2 verbs as set out in Campbell (1959):

(2.20) *Weak Class 2 verb model paradigm (West Saxon)*

lufian ‘love’

	Pres ind.	Past subjunctive
Sg.		
1 <sup>st</sup>	lufige	lufige
2 <sup>nd</sup>	lufast	lufige
3 <sup>rd</sup>	lufap	lufige
Pl.	lufiap	lufigen

lufian ‘love’

	Past ind.	Past subjunctive
Sg.		
1 <sup>st</sup>	lufode	lufode
2 <sup>nd</sup>	lufodeſt	lufode
3 <sup>rd</sup>	lufode	lufode
Pl.	lufodon	lufoden

The pret. and part. show much less complexity than the verbs of Class 1, since they are not expected to undergo HVD. The normal West Saxon theme is *-o-*, which comes from an earlier form, *-u-*, which is found in early Glossaries including the Epinal gloss. This is to be expected as a shortening of \*/o:/, is also seen in the o-stem nouns nom.sg. resulting in *-u*. While WS usually has *-o-*, *-a-* is common in Anglian. Syncope in the past of Class 2 verbs is very rare, and according to Campbell (1959: §762.3) is due to analogy of Classes 1 and 3. There is generally no controversy in the handbooks regarding Class 2, and the lack of syncope is generally assumed to be due to the thematic vowel, which was historically long. How this can be accounted for within OT will be considered in Chapter 7. I will consider, for example, accounts in which HVD is assumed to be lexicalised, such as Minkova (2012), in which Class 2 is assumed to have an underlying thematic vowel, while many parts of the Class 1 paradigm are assumed to be consonantal. I will also consider alternative methods, such as preventing syncope in Class 2 on account of the historical length, thus following the essence of Campbell’s (1959) description. In

such a treatment, the Class 2 weak verbs could therefore be seen to exhibit a similar blocking effect to that seen in *gylden* in the adjectives, and *nīeten* in the nouns.

### 2.3. NON-HIGH VOWEL SYNCOPE

According to the handbook description, Non-High Vowel Deletion (henceforth N-HVD) is responsible for the syncope of original unaccented *a* in prehistoric OE, whether fronted to *æ* or fronted and mutated to *e* (Campbell 1959: §341). Similarly to HVD, this process only occurs in open syllables, and to unstressed vowels. However, unlike HVD, the process does not have any weight conditioning, in that vowels may be removed following either a heavy or a light syllable. Of particular relevance to this study is the strong past participle in verbs, since the *-en* past participle affix contains an unaccented non-high vowel, and therefore should be subject not to weight-conditioned HVD, but to un-weight conditioned N-HVD. Since the vowels targeted by both processes are commonly reduced to schwa in the dialects under consideration, for the rest of this thesis, the terms N-HVD and HVD should be taken to mean ‘non weight conditioned syncope’ and ‘weight conditioned syncope’ respectively.

#### 2.3.1. *Non-high vowel deletion and the strong past participle*

Campbell (1959: §644.c) discusses the syncope of the inflected strong past participles alongside the other adjectives, dealing only with the uninflected, and therefore, unsyncope forms such as *bunden* ‘bound’ within the chapter on verbs. As a result of this, the distinction between the HVD found in weak inflected past participles and the N-HVD expected in strong inflected past participles is not explicitly made, and he states that ‘syncope is less usual in W-S, e.g. *gebundene* bound, *forcofene* cut [...]. Syncope is frequent in *VP*, but less so in *Ru.*<sup>1</sup> and North.’

The model paradigm for inflected strong past participles should include deletion in any inflected forms which allow the medial syllable to be open:

(2.21)	Masculine	
	<i>bindan</i> Part. <i>bunden</i> ‘bound’	<i>cweðan</i> Part. <i>cweden</i> ‘said’
Sg.		
Nom.	bunden	cweden
Acc.	bundenne	cwedenne
Gen.	bundnes	cwednes
Dat.	bundnum	cwednum
Pl.		
Nom.	bundne	cwedne
Acc.	bundne	cwedne
Gen.	bundenra	cwedenra
Dat.	bundnum	cwednum

As Campbell (1959) notes, syncope often fails. However, as shown in Chapter 8 of this thesis, the situation is far more complex than shown in this model paradigm. The instances of syncope failure shown in the past participles, both weak and strong, have been put down to analogy to the highly salient uninflected, and thus, unsyncopeated past participle. However, the failure of N-HVD in the strong past participle is of a completely different nature from the failure of HVD in the weak past participle, and shows additional phonological conditioning. Crucially, as will be shown in Chapter 8, syncope may fail in the instance of any root-final consonant, but may only apply in the instance of a root-final stop. The attested paradigms for *Li.* and EWS are therefore as follows:

(2.22)	Masculine	
	<i>faran</i> Part. <i>faren</i> ‘travelled’	<i>cweðan</i> Part. <i>cweden</i> ‘said’
Sg.		
Nom.	faren	cweden
Acc.	farenne	cwedenne
Gen.	farenes	cwed(e)nes
Dat.	farenum	cwed(e)num

Pl.

Nom.	farene	cwede(ne)
Acc.	farene	cwede(ne)
Gen.	farene	cwedenra
Dat.	farenum	cwede(ne)num

We can see that in this paradigm, not only does N-HVD apply only sporadically, but that extra phonological conditioning is in place. The analogy explanation is clearly insufficient to capture the behaviour of the strong past participles.

## 2.4. FOOT STRUCTURE AND STRESS IN OLD ENGLISH

Many of the phonological processes that have been discussed so far in this chapter are heavily conditioned by prosody. For example, HVD targets high vowels that are in a certain prosodic environment. The result of HVD is that ‘high’ vowels that cannot be incorporated into a well-formed metric foot are removed, thus creating a better formed prosodic word. This description of HVD, as well as the later analysis, relies upon many assumptions about Old English prosody. This section, therefore, aims to provide an outline of my assumptions about Old English prosody. Since this study adopts an OT framework, I will introduce and refer to some of the relevant constraints here, thus providing an OT description of OE foot and syllable well-formedness principles.

### 2.4.1. *The Old English Syllable*

#### 2.4.1.1. *Sonority and the OE syllable*

The following sections all make reference to sonority, which has an effect upon the types of syllable constructions that are permissible in OE. Following Clements (2006), I assume that sonority is related to the quality of resonance (Clements 2006: 3). Resonant sounds are those with a low degree of acoustic resistance and loss, and

an undamped formant structure, vowels being the best example. This, Clements (2006: 3) argues, is superior to the loudness accounts (e.g. Ladefoged 1993), as certain sibilants such as [ʃ] are louder than nasals, but are not treated as more sonorous typologically. The OT constraints that will be used in the analyses which make reference to sonority will therefore assume this definition. Many such constraints are based upon a long history of sonority-based explanation. In particular, the following sonority principles:

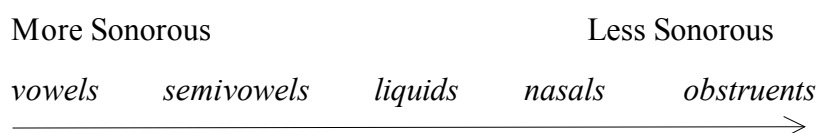
(2.23)

- i. Sonority Sequencing: sonority increases from the syllable margin to the peak.
- ii. Sonority-Syllabicity Alignment: sonority peaks correspond to syllable peaks.
- iii. Syllable Contact: sonority drops maximally across syllable boundaries

(Clements 2006: 5, Vennemann 1988)

Following the resonance definition of sonority, principle (i) relies upon the following scale:

(2.24) Resonance-based sonority sequence (based on Clements 2006: 4)



Principle (ii) is defined in OT using the constraint  $\text{SONPK} \rightarrow \sigma$ :

(2.25)

$\text{SONPK} \rightarrow \sigma$  (Selkirk 1984)<sup>6</sup>

Any segment that constitutes a sonority peak must head a syllable.

---

<sup>6</sup> This OT constraint is based on insights found in Selkirk 1984, though it is not representative of the theoretical framework found in Selkirk (1984).

Ranked highly, this constraint would force an OE form such as /wætr/ ‘water’ to be syllabified as [ω[.wæ.tr]]. The constraint that would override this is NUC→V:

(2.26)

NUC→V (Prince & Smolensky 1993)

Every syllable must be headed by a vowel.

If ranked above SONPK→σ, NUC→V would prevent a syllabic sonorant due to the requirement that only vowels may constitute nuclei. Principle (iii) (Vennemann 1988), will be defined using the following OT constraint:

(2.27)

CONTACT (Vennemann 1988; Clements 1990, 1992)

If  $\alpha_\sigma$ [[ $\sigma\beta$ ], then  $\text{son}(\alpha) \geq \text{son}(\beta)$ .

This constraint has been argued to be highly ranked in Late West Saxon (Bermúdez-Otero 2005). Chapter 8 will examine whether the principle is enforced in *Li.* and EWS. As stated in Clements (2006), these principles are not inviolable, and hence OT is well suited to dealing with sonority based syllable constraints. I will now move onto the constraints involved in OE syllable well-formedness.

#### 2.4.1.2. OE Onsets

Old English allows any single consonant as an onset, excluding /dʒ/ (Gąsiorowski 1997: 14). Empty onsets are also allowed, and complex onsets are permitted, with clusters consisting of an obstruent + sonorant being very common, e.g. *cwene* ‘queen’ *blind* ‘blind’ etc. There are also cases of onset clusters which violate the Sonority Sequencing Principle and contain two obstruents: /sp/, /st/, /sk/. Gąsiorowski (1997: 15) points out that these three clusters are given special treatment in Old English, as they are the only onset clusters allowing two obstruents, and the /s/ and the stop appear to be treated as one segment by Old English poets



with respect to alliteration. The three clusters are also able to be followed by /r/, and less commonly /l/ (although \*/stl/ is not possible) resulting in the only onset clusters containing three consonants found in Old English. Certain onset clusters are phonotactically banned in OE, which has implications for vowel deletion. This is due to the fact that coda clusters will, where possible, be attracted to the onset of a following syllable within a prosodic word. This will not be permitted when (a), it would leave behind a monomoraic foot, and (b), it would create a banned syllable onset. For example, consider the following forms, noting that vowel deletion *only applies in open syllables*:

(2.28)

(a) *bunden+um* ‘bound DAT.’

[<sub>ω</sub>[.bun.].de.num.] → [<sub>ω</sub>[.bund.].num.] (open syllable targeted by deletion)

(b) *bunden+re* ‘bound GEN.’

[<sub>ω</sub>[.bun.].den.re.] → [<sub>ω</sub>[.bun.].den.re.] (closed syllable that cannot be targeted by deletion)

In these examples, deletion relies upon the opening up of the medial syllable through inflexion. The *-re* inflexion, though, cannot attract the *n*, since *\*nr* is not a possible onset. Deletion therefore cannot apply. Other syllable onsets that are not permitted are: *\*dl*, *\*tl*, *\*dn*, *\*tn*, *\*n(+cons)* etc.

#### 2.4.1.3. The OE rhyme

I will now move from the possible onsets to the rhyme, as the prosodically motivated processes that I will be examining are concerned only with the rhyme. Onsets are also irrelevant when it comes to incorporating syllables into feet. An Old English rhyme must contain a syllabic element, which must be a sonority peak. Later in this section I will discuss the possibilities of syllabic consonants. The nucleus may consist of one or two morae, e.g. *stan* /sta:n/ ‘stone’, *scip* /ʃip/ ‘ship’. A syllable containing a long vowel is heavy, whether or not there is a coda. Unlike Present Day

English, Old English light syllables can be based upon a short diphthong. If present, a coda affects the weight of the syllable. As we have seen towards the beginning of this chapter, according to Campbell (1959), for the purposes of weight-driven deletion processes such as HVD a short vowel plus a single coda consonant is treated as light. A heavy syllable consists of either a long vowel, with an optional consonant, or a short vowel with at least two coda consonants. This is problematic, as it is not expected that a singleton coda consonant should fail to count towards the syllable weight. Although there are languages in which only vowels may count towards syllable weight (Gąsiorowski 1997: 65), Old English clearly does not fall into this category, as shown by the fact that two or more coda consonants result in a heavy syllable. This problem can be solved by assuming the final consonant of a word final syllable to be extrametrical (Gąsiorowski 1997: 78). These extrametrical consonants therefore do not count towards syllable weight. However, although this would account nicely for the distinction between *scip* and *stān*, monomoraic feet are not permitted in Old English. The theory needs to be able to account for why HVD sees *scip* ‘ship’ and *til* ‘good’ as light, given that well-formedness constraints prevent the final consonant from being extrametrical. The final consonant, though it is not equal to a long vowel or a consonant cluster, makes a difference in that it allows the formation of a bimoraic monosyllabic foot, while *\*ti* would be banned as a foot. Gąsiorowski (1997: 78) notes that since extrametrical consonants cannot be incorporated into feet, there is a problem regarding words containing only two moras, as in *scip*. He suggests that to solve this, the extrametrical mora needs to be metrical, and therefore parsed into a foot in bimoraic words: [<sub>ω</sub>[.ḡip.]], as opposed to [<sub>ω</sub>[.ḡi.]p]. This is the analysis assumed in Bermúdez-Otero (2005: §7.3), in which it is assumed that FTBIN, ranked above NONFIN, requires that extrametricality is not allowed to prevent domain final feet if in doing so it compromises the foot:

(2.29)

FT-BIN: Feet are binary, either moraically or syllabically (Prince & Smolensky 1993: 47).

(2.30)

NONFIN: No foot is final in  $\omega$  (Kager 1999: 151; cf. Prince & Smolensky 1993: 73).

In the later analyses, I will assume that stem final segments may become extrasyllabic where the constraints on foot and syllable well-formedness demand it in order to satisfy NONFIN. However, where constraints create the need for a stem-final segment to become extrasyllabic, only one such segment may be affected (Bermúdez-Otero 2005: §7.3; McCully & Hogg 1990: 325). These well-formedness constraints also include the prevention of superheavy syllables and unbalanced disyllabic feet.

As discussed above, sonority is one of the factors often used to explain the constraints upon possible syllables. However, the sonority hierarchy (Goldsmith 1990) is fairly frequently violated in a number of languages. Old English clearly shows sensitivity to levels of sonority, with certain violations undergoing repair strategies such as parasiting (Campbell 1959: §574.3). For example, parasiting can be seen in certain codas containing an obstruent+sonorant cluster that violates the sonority principle in uninflected nouns and adjectives ending in such clusters, e.g. *wæter* ‘water’, *fæger* ‘fair’. Certain forms such as these do appear uninflected without the parasite, though these are rare, and confined to particular lexemes, for example, *hrefn* ‘raven’, *sedl* ‘seat’. The highly sonorous sonorant would be expected to form the peak of a syllable, according to the sonority principle. This leads to the question of whether these forms are really violations of the Sonority Sequencing Principle, or whether the final sonorant is syllabic.

Peinovich (1979: 105), in his rule-based linear analysis of nouns, assumes a monosyllabic underlying representation, but presents a rule of sonorant syllabification to allow for a syllabified surface form:


(2.31) Sonorant syllabification (Peinovich 1979: 105)

$$[-\text{obs}] \longrightarrow \left\{ \begin{array}{l} [+ \text{syll}] \\ [- \text{syll}] \end{array} \right\} / [+ \text{cons}] \text{ \_\_\_\_\_\_ } [+ \text{cons}]$$

Evidence for the non-syllabicity of these sonorants comes from poetic metre, according to Bermúdez-Otero (2005: §7.3, Fulk 1992: §76), in which it is argued that early OE poetic metre treats forms such as *wæter* ‘water’ as monosyllabic.

In terms of OT, parsing obstruent+sonorant clusters as non-syllabic constitutes a violation of  $\text{SONPK} \rightarrow \sigma$ . The overriding constraint is  $\text{NUC} \rightarrow \text{V}$ . Hence the following ranking applies:  $\text{NUC} \rightarrow \text{V} \gg \text{SONPK} \rightarrow \sigma$ , allowing the output /fægr/:

(2.32)

/fæjr/	$\text{NUC} \rightarrow \text{V}$	$\text{SONPK} \rightarrow \sigma$
$[\omega[.fæ.jr.]]$	*!	
$[\omega[.fæj.r]]$ 		*

According to Gąsiorowski (1997: 20) an analysis that assumes that the final sonorant is not syllabic, as in the above, is backed up by certain repair processes in addition to parasiting in Old English. The examples he gives are variant forms such *sedl* ~ *seld* ‘seat’ and *hrefn* ~ *hremn* ~ *hrem* ‘raven’. Gąsiorowski’s (1997: 20) assumption is that a disyllabic form with a syllabic sonorant would be less likely to motivate such a repair process.

#### 2.4.2. Old English feet

As stated above, similarly to Present-Day English, Old English does not tolerate monomoraic feet. In Optimality Theoretic terms, this tendency can be enforced by ensuring that  $\text{FT-BIN}$  is ranked highly in the grammar (Bermúdez-Otero 2005).

I assume the feet in Old English to be based on moraic trochees (Idsardi 1994). Monosyllabic feet, however, are permitted, e.g. *word* ‘word’, *scip* ‘ship’. Pairs of light constituents can also be grouped together to form a metrical foot (Idsardi 1994):  $[\omega[.ʃi.pu.]]$  ‘ships’. A disyllabic foot must be headed by a light

syllable, however, as a foot cannot be comprised of a heavy syllable followed by a light syllable:

(2.33)

RHHRM: \*(HL)

Greater length is not permitted at the beginning of trochees

(Prince & Smolensky 1993: 59)

(2.34)

PARSE- $\sigma$  (Smolensky 1993)

All syllables must be parsed as feet.

RHHRM is particularly important as regards HVD, as deletion only targets unfooted syllables. The creation of (HL) trochees would allow the vowels that are targeted by deletion to be incorporated into feet: *hīeran*, pret. *hīer+ede* \* $[\omega[.hi:e.re.].de.]$ . This is clearly not acceptable in OE, since it is only when a disyllabic foot of two light syllables can be built that the medial vowel escapes deletion: *herian* ‘praise’ *herede*  $[\omega[.he.re.].de.]$ . Therefore, the outcomes are *hīerde* (syncope) and *herede* (no syncope):

(2.35)

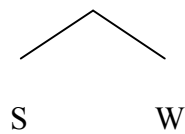
		RHHRM	FT-BIN	PARSE- $\sigma$
$[\omega[.hi:e.].re.de.]$ ‘heard’	$[\omega[.hi:e.].re.de.]$			**!
	$[\omega[.hi:e.re.].de.]$	*!		*
	$[\omega[.hi:er.].de.]$ 𐀀			*
$[\omega[.he.re.].de.]$ ‘praised’	$[\omega[.he.re.].de.]$ 𐀀			*
	$[\omega[.he.].re.de.]$		*!	**

### 2.4.3. Stress in Old English

In contrast to the stress assignment of Present-Day English, in which the primary stress operates from the right to the left, primary stress in Old English operates from left to right (McCully & Hogg 1990: 315) with most words having stress on the initial syllable e.g. *lúfiende* ‘loving’. This process has been described using the *Old English Stress Rule* (OESR) (Suphi 1988: 180):

(2.36)

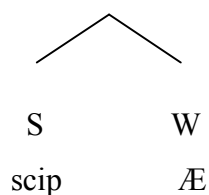
*OE Stress Rule*



$[\sigma \rightarrow [\sigma$

The above version is the revised, simpler rule given in Suphi (1988). It states that a morpheme initial syllable will become the stronger sister of a disyllabic stress foot (Suphi 1988, Gąsiorowski 1997: 47). In this framework the notion of a *zero syllable* (Giegerich 1983; 1985) comes into play in the instance of a monosyllabic foot:

(2.37)



The prefix *ge-*, however, is always unstressed (Campbell 1959 §74). In Suphi's (1985) OESR, prefixes are classified separately from stems and suffixes, and are skipped over by the stress assigning process. However, Suphi (1988) revises the theory, favouring stratification over lexical labels:

(2.38)

Level 1: Lexical items, nominal and adjectival prefixation, *certain* suffixes.

Level 2: Verbal and adverbial prefixation, derivational suffixation.

Under Suphi's (1988) framework, the OESR therefore applies at Level 1, ignoring morphemes produced at Level 2. This is supported, for example, with the fact that verb prefixation is always unstressed, except in cases where a noun with an existing stressed prefix is formed as a verb, e.g. *andswaran* 'to answer'. Bermúdez-Otero & Hogg (2003) argue that the behavior of HVD in West Saxon nouns provides separate evidence for a stratified grammar in Old English. In their example the nom/acc.pl.neut. *-u* (replaced by *-a*), which they claim is a level one suffix, undergoes deletion, while a phonologically identical Level 2 gen.pl. suffix, *-a* does not undergo deletion even in the same prosodic conditions (more details of Bermúdez-Otero & Hogg's (2003) analysis will be provided in Section 2.6 of this chapter). Independent evidence in favour of the stratal split comes from Suphi (1988), in which it is claimed that Old English root final fricatives undergo voicing only when followed by Level 2 suffixes (Suphi 1988).

Heavy syllables, and also initial syllables attract stress (Idsardi 1994), and begin metrical feet. As noted above, however, prefixes in verbs are unstressed in the majority of cases.

## 2.5. AN OT ACCOUNT OF HIGH AND NON-HIGH VOWEL DELETION

### 2.5.1. *High vowel deletion*

A more comprehensive discussion of the theoretical framework used in this study will be presented in Chapter 4, and will involve discussion of how to model morphophonological interaction within OT. This is a subject that will not be investigated in this section, as the focus here is to provide a basic OT account of high vowel syncope and apocope, and non-high vowel syncope.

Whether or not HVD applies, according to handbook accounts, is dependent on the weight of the preceding syllable, and also the stress of the target vowel. This

can be modelled successfully in OT using prosodic constraints. Following Bermúdez-Otero (2005), Hogg (2000) and Bermúdez-Otero & Hogg (2003), I assume that high vowel deletion is a repair process for unfooted unstressed syllables. Hogg (2000) analyses this using the constraint  $\text{PARSE-}\sigma$  (Smolensky 1993), which requires all syllables to be parsed as feet. On the other hand, Bermúdez-Otero (2005) argues that the active constraint must be  $\text{PARSE-}\check{\sigma}$  (Smolensky 1993), which only requires light syllables to be parsed as feet. The importance of this distinction will be discussed shortly.

(2.39)

$\text{PARSE-}\check{\sigma}$  (Smolensky 1993)

All light syllables must be parsed as feet.

$\text{PARSE-}\check{\sigma}$  and  $\text{PARSE-}\sigma$  force repair of unfooted syllables by deletion when ranked above the faithfulness constraint  $\text{MAX-V}$ :

(2.40)

$\text{MAX-V}$

No deletion of vowels

An analysis using the first, and more general of these constraints should allow unstressed syllables to be deleted even if they are closed. On the other hand,  $\text{PARSE-}\check{\sigma}$  will only cause light syllables to be deleted. I use the noun example discussed in Hogg (2000) in illustrating this distinction. When inflected, *hēafod* ‘head’ contains two unfooted syllables:  $[\omega[.hæ:\alpha.].vo.du.]$ . However, both syllables do not undergo deletion at the same time. We are therefore left with the problem of why *hēafd* is not the result of deletion. Additionally, the uninflected form *hēafod* does have an unfooted syllable, though it is not light:  $[\omega[.hæ:\alpha.].fod.]$ . Something in the constraint ranking is needed to prevent the deletion of closed syllables. The constraint above, employed in Bermúdez-Otero (2005):  $\text{PARSE-}\check{\sigma}$ , does not allow double deletion in *hēafod*, since the operation of apocope leaves a vowel that is in a closed syllable.





Another constraint, MAX-V<sup>2</sup>, requires that where deletion must apply, only one vowel may be lost:

(2.41)

MAX-V<sup>2</sup>

No more than one input vowel may be deleted

(2.42)

Input	Candidates	MAX-V <sup>2</sup>	PARSE-Ǿ	MAX-V
/hæ:afod/	[ <sub>ω</sub> [.hæ:a.].fod.] 			
	[ <sub>ω</sub> [.hæ:af.]d]			*!
/hæ:afodu/	[ <sub>ω</sub> [.hæ:a.].fo.du.]		**!	
	[ <sub>ω</sub> [.hæ:a.].fod.] 			*
	[ <sub>ω</sub> [.hæ:af.]d]	*!		**

The problem with this ranking is that the apocopated, but unsyncopated form, [<sub>ω</sub>[.hæ:a.].fod.], is not the winning candidate in all dialects. The tableau correctly models the apocope seen in the nom.sg.fem. of disyllabic adjectives, and also the nom/acc.pl.neut. of disyllabic nouns in Mercian (See Bermúdez-Otero 2005: fn. 42, and Thompson 2005). However, the candidate *hēafdu*, showing syncope and no apocope is missing from the tableau, and is actually the successful form in West Saxon nouns. The ranking has no way at this point of forcing syncope, however, this issue will be addressed in tableau (2.43). I will first compare the success of the {MAX-V<sup>2</sup> >> PARSE-Ǿ} and the {\*VVCC >> PARSE-σ} rankings in modeling apocope, and most importantly, in preventing the unattested *\*hēafd*. MAX-V<sup>2</sup> prevents deletion from removing both of the unfooted open syllables in [<sub>ω</sub>[.hæ:a.].vo.du.], and the uninflected *hēafod* would not be subject to syncope, as it contains only an unfooted *closed* syllable. In Hogg's (2000) account, in which the more general constraint, PARSE-σ, is used to motivate deletion, the uninflected form *hēafod* would be penalized due to the unfooted closed syllable: [<sub>ω</sub>[.hæ:a.].vod.]

Therefore, another constraint is required to prevent outputs such as *hēafð*. The constraint proposed in Hogg (2000) is \*VVCC:


(2.43)

\*VVCC

No superheavy syllables

Since double deletion within *hēafodu*, or deletion within uninflected *hēafod* would result in *hēafð*, \*VVCC would be violated, and thus, the inclusion of this constraint successfully prevents that from happening:

(2.44)

Input	Candidates	*VVCC	PARSE-σ	MAX-V
/hæ:afod/	[ <sub>ω</sub> [.hæ:a.].vod.]		*	
	[ <sub>ω</sub> [.hæ:af.]d]	*!		*!
/hæ:afodu/	[ <sub>ω</sub> [.hæ:a.].vo.du.]		**!	
	[ <sub>ω</sub> [.hæ:a.].vod.] 		*	*
	[ <sub>ω</sub> [.hæ:af.]d]	*!		**

The combination of MAX-V<sup>2</sup> AND PARSE-Œ, can successfully result in the correct output as can the combination of \*VVCC and PARSE-σ. Therefore, in deciding which set of constraints accounts for the alternations best, it is necessary to consider the wider implications for the phonology of Old English. If we turn to the weak preterite, we can see that \*VVCC in the past participles is violated when root-final dental forms trigger overapplication of syncope in uninflected past participles: *lædd* ‘led’. This is a deletion process that is argued not to be caused by HVD, but by avoidance of [DəD] clusters (see Chapters 7 and 8 for more details). HVD, however, never deletes the vowels of closed syllables, and neither does N-HVD. Therefore, I argue that PARSE-Œ better describes HVD. Additionally, we are not left with the

problematic issue of \*VVCC clusters being the only reason for the prevention of *hēafd*, within a dialect in which VVCC clusters are attested in other lexical classes.

The use of PARSE- $\check{\sigma}$  to motivate deletion, and MAX-V<sup>2</sup> to prevent double deletion allows forms such as [ω[.hæ:ɑ.].vo.du.] to surface as *hēafdu*, rather than *hēafd*. However, the one problem not yet discussed is which vowel should be deleted. Although MAX-V<sup>2</sup> prevents [ω[.hæ:ɑ.].vo.du.] from undergoing HVD twice, we are left with the problem of why only the medial vowel is deleted.<sup>7</sup> Following Bermúdez-Otero (2005), I assume that the medial syllable is targeted due to its position within a stress well. Bermúdez-Otero (2005: fig. 7.27) formulates a constraint based upon insights from Halle & Vergnaud (1987b: 238), who argue that stressed syllables create stress wells. Bermúdez-Otero proposes a more general principle, in which a stress well is created by any stronger prosodic unit. In terms of HVD, the stronger prosodic unit is the foot. The constraint is as follows:

(2.45)

STRESSWELL (Bermúdez-Otero 2005: fig. 7.27)

If

- $\alpha$  is a vowel in the input,
- $\beta$  is a correspondent in of  $\alpha$  in the output,
- at least one syllable intervenes between  $\beta$  and any strong prosodic unit (syllable or foot),

then  $\beta \neq \emptyset$

Note that the constraint does not *motivate* deletion in a stress well, but states that an output vowel should not be deleted if a syllable intervenes between it and the stronger prosodic unit, i.e., if deletion proceeds, it must be of the vowel in the stress well. It therefore prevents apocope in *hēafodu*. This constraint will also be of

---


<sup>7</sup> I continue to use the noun example here, since it provides two target vowels for HVD, the (historically) high medial *o*, and the high *u*. Synchronically, as stated above, I do not assume that the vowel quality is part of the conditions for HVD. Instead, the verbs, such as pret. [ω[hɪe.].re.de.] simply do not provide two deletion sites since the preterite suffix is not attached at Level 1, in the domain of apocope.

importance when we come to discuss the traditional definition of N-HVD. Therefore, following Bermúdez-Otero (2005) I will assume that the ranking in (2.43) is in place in order to force high vowel deletion. Tableau (2.44) contains the candidate which was absent from (2.41) *hēafdu*:

(2.46)


MAX-V<sup>2</sup> >> STRESSWELL >> PARSE-Ǿ >> MAX-V >> PARSE-σ

(2.47)

Input	Candidates	MAX-V <sup>2</sup>	STRESSWELL	PARSE-Ǿ	MAX-V
/hæ:afodu/	[ <sub>ω</sub> [.hæ:a.].vo.du.]			**!	
	[ <sub>ω</sub> [.hæ:a.].vod.]		*!		*
	[ <sub>ω</sub> [.hæ:af.]d]	*!			**
	[ <sub>ω</sub> [.hæ:af.].du.] 			*	*

This ranking can also account for basic HVD in the verbs. For example, a form such as *hīerede* should emerge from this ranking as *hīerde*. The final *-e* is not an apocoping vowel, owing to the restricted domain of apocope. We can thus assume that STRESSWELL is ranked above PARSE-Ǿ in the domain of the weak preterite (Level 2).

(2.48)

hi:er+ede ‘heard’	MAX-V <sup>2</sup>	STRESSWELL	PARSE-Ǿ	MAX-V	PARSE-σ
[ <sub>ω</sub> [.hi:e.].re.de.]			**!		**
[ <sub>ω</sub> [.hi:er.]. Ø de.] 			*	*	*
[ <sub>ω</sub> [.hi:er.]d]	*!			**	
[ <sub>ω</sub> [.hi:e.].red Ø.]		*!		*	*

Note that the analysis itself does not actually address the ‘high’ element of high vowel deletion. This condition has long been the victim of opacity, which is shown in the fact that even in handbook accounts non-high /o/ from historical /u/ is assumed to be subject to deletion. As discussed above, Bermúdez-Otero & Hogg also provide further evidence from Late West Saxon indicating that the synchronic vowel length condition is no longer active, as the *-a* nom/acc.pl.neut. suffix undergoes apocope. As far as the analysis within this thesis is concerned, there is no longer a synchronic ‘high’ condition in high vowel deletion. The fact that only historically high vowel suffixes undergo deletion is argued to be the result of morphological conditioning, i.e. high vowel deletion, which I consider to be actively weight conditioned, and has become restricted to the morphological categories that historically had a high unstressed vowel. The assumption that this rests on is that the opaque vowel height condition was more easily reinterpreted as being a morphological condition. In contrast, the historical length condition is argued, following Bermúdez-Otero (2005) to have synchronic phonological effects.<sup>8</sup>

### 2.5.2. Non-high vowel deletion

Non-high vowel deletion is assumed to apply to historically non-high vowels, yielding forms such as *bunden+um* ‘bound+dat.’ *bundnum* \**bundenum* (see e.g. Campbell 1959: §341). Note that like high vowel deletion, the relevant vowels are commonly reduced to schwa, as indicated by the orthographic <e> in the texts under investigation. According to Campbell (1959: §341) the change affected *a*, which is also affected when later mutated to *æ*, and *e*. In Campbell (1959) and Hogg (1992) etc. the change is described, similarly to HVD, as having happened in an earlier period of OE, entailing the Neogrammarian assumption that this operated as a sound law that did not allow for exceptions. Hogg & Fulk (2011) suggest that the variable failure of syncope in the past participle is due to analogy from the uninflected unsyncopeated forms.

In this thesis, I aim to reveal whether either or both of these processes were active in the verbs of *Li.* and EWS. In order to do so, we must consider the

---

<sup>8</sup> This element of the account is discussed in full in Chapter 7.

synchronic situation that these phonological processes operate in, if they indeed do operate, as opposed to showing only their lexicalised traces. Synchronically, there is therefore no difference in the vowel quality of many of the vowels targeted by high vowel deletion and non-high vowel deletion. Instead, the handbooks categorise them on the basis of historical height. I will not, in the subsequent analyses, be explicitly referring to the vowel height, and therefore, my terms are used due to the highly recognisable nature of the terms as a result of their traditional use. N-HVD, like HVD, only applies in inflected forms according to the handbooks, due to the creation of an open syllable. So far, the two processes appear to be the same, with only historical vowel height as the distinction. There is, though, an important difference: non-high vowel deletion does not care whether the target vowel follows a heavy or light stem syllable. The handbook description, raised in 2.3.1, can be summarised as follows:

(2.49)

**Non-high vowel deletion**

‘In all medial syllables the non-high vowels /ɑ e æ/ were subject to syncope in all environments except where the syllable was closed.’

(Hogg 1992: §6.14)

Like HVD, N-HVD also had a final counterpart; non-high vowel apocope, though this process is not evidenced in OE, and appears to have resulted in restructured inputs. Non-high vowel apocope will therefore not be discussed any further, and discussion of N-HVD will be limited to syncope. This process is clearly related to high vowel deletion, in that it deletes unstressed vowels in particularly weak positions within the prosodic word. I will now provide a basic OT analysis that can motivate non-high vowel deletion, as described in the handbooks. A note of caution, however, is required. Firstly, unlike HVD, I will not be arguing that the following rankings are actually evident in either of the dialects under consideration, but will instead argue that they form part of the pre-history of Old English. See Chapters 8 and 9 for more details. Secondly, the following account does not take into account any other morphological conditioning or additional phonological conditioning.

Our ranking for HVD only enforces weight conditioned deletion, and is therefore incorrect for N-HVD as described in the handbooks:

(2.50)

(a) Uninflected heavy

bunden ‘bound’ [ <sub>ω</sub> [.bund.].en.]	MAX-V <sup>2</sup>	STRESSWELL	PARSE-Ǿ	MAX-V	PARSE-σ
[ <sub>ω</sub> [.bun.].den.] ǿ					*
[ <sub>ω</sub> [.bun.].dØn]				*!	

(b) Uninflected light

brocen ‘broken’ [ <sub>ω</sub> [.brok.].en.]	MAX-V <sup>2</sup>	STRESSWELL	PARSE-Ǿ	MAX-V	PARSE-σ
[ <sub>ω</sub> [.brok.].en.] ǿ					*
[ <sub>ω</sub> [.brok.].Øn]				*!	

(c) Inflected heavy

bunden ‘bound’ [ <sub>ω</sub> [.bund.].en.]+um	MAX-V <sup>2</sup>	STRESSWELL	PARSE-Ǿ	MAX-V	PARSE-σ
[ <sub>ω</sub> [.bun.].de.num]			**!		**
[ <sub>ω</sub> [.bund.].Ø.num.] ǿ			*	*	*

(d) Inflected light

brocenum ‘broken’ [ <sub>ω</sub> [.brok.].en.]+um	MAX-V <sup>2</sup>	STRESSWELL	PARSE-Ǿ	MAX-V	PARSE-σ
[ <sub>ω</sub> [.bro.ke].num] ǿ					*
[ <sub>ω</sub> [.bro.kØ.].num.]				*!	*

The ranking for HVD correctly rules out deletion in uninflected forms, but incorrectly prevents deletion in light inflected forms such as *brocen+um*. The aspect of the ranking that correctly prevents deletion in the uninflected forms is the [ ǿ ] element of PARSE-Ǿ, since only open syllables are to be targeted. The other aspect to

the constraint, the penalising of unfooted syllables; PARSE- $\sigma$ , is not required in an analysis of N-HVD, since we need to be able to enforce deletion in footed syllables that are light and in a stress well. PARSE- $\check{\sigma}$  is a conflation of PARSE- $\sigma$  and  $**\check{\sigma}$  (Bermúdez-Otero 2005):

(2.51)

$**\check{\sigma}$  (Broselow 1992: 32, Kager 1999b: 217, Kiparsky forthcoming)

A syllable must not be monomoraic.

This is the constraint that is the motivation behind non-high vowel deletion, in conjunction with STRESSWELL, which demands that only light syllables that are adjacent to a stronger unit are to be deleted.<sup>9</sup> I assume here, following Halle & Vergnaud (1987b: 238), that the stress well may be created by a stressed syllable in the period within which this process operates.

(2.52)  $\text{Max-V}^2 \gg \text{StressWell} \gg **\check{\sigma} \gg \text{Max-V} \gg \text{parse-}\check{\sigma}$

(2.53)

(a) Heavy uninflected

base + /-en/ bund+en	MAX-V <sup>2</sup>	STRESSWELL	$**\check{\sigma}$	MAX-V	PARSE- $\check{\sigma}$	PARSE- $\sigma$
[ <sub>ω</sub> [.bun.].den.] $\nrightarrow$						*
[ <sub>ω</sub> [.bund.].n]				*!		

<sup>9</sup> In order to prevent this analysis from causing the deletion of light final vowels after light feet, the constraint Anchor-R must outrank  $**\check{\sigma}$ , banning deletion or insertion at the right edge of the domain. For example, *til+u* ‘good’ should not undergo deletion. The domain for this constraint is the prosodic word.

Although this analysis is later argued not to actually be in place synchronically in OE, I make the assumption that it was at an earlier time, as indicated by fossilised forms. I do not intend, however, to assume that forms such as *til+u* underwent deletion.



## (b) Heavy inflected

base + /-en-/ + /e/ bund+en+e	MAX-V <sup>2</sup>	STRESSWELL	**Ǿ	MAX-V	PARSE-Ǿ	PARSE-σ
[ <sub>ω</sub> [.bun.].de.ne.]			**!		**	**
[ <sub>ω</sub> [.bund.].ne.] ǿ			*	*	*	*
[ <sub>ω</sub> [.bund.].en.]		*!		*		*
[ <sub>ω</sub> [.bund.].n]	*!			**		

(2.54)

## (a) Light uninflected

base + /-en-/ + /e/ broc+en	MAX-V <sup>2</sup>	STRESSWELL	**Ǿ	MAX-V	PARSE-Ǿ	PARSE-σ
[ <sub>ω</sub> [.bro.ke.].n] ǿ						*
[ <sub>ω</sub> [.brok.].n.]				*!		

## (b) Light inflected

base + /-en-/ + /e/ broc+en+e	MAX-V <sup>2</sup>	STRESSWELL	**Ǿ	MAX-V	PARSE-Ǿ	PARSE-σ
[ <sub>ω</sub> [.bro.ke.].ne.]			**!		*	*
[ <sub>ω</sub> [.bro.kne.]] ǿ				*		
[ <sub>ω</sub> [.bro.ke.].n]		*!		*		
[ <sub>ω</sub> [.brok.].n]	*!			**		

The ranking in (2.52) therefore correctly causes the deletion of medial light syllables following a stressed syllable, whether the stressed syllable in question is light or heavy. Thus, we have the basic constraint rankings needed to enforce N-HVD and HVD. Note that I will argue later that these processes did not operate at the same time, but that HVD is in effect a later development of the obsolete and more general N-HVD. It is of course the case, that if these two processes were in operation within the same domain synchronically the ranking for N-HVD would cause

overapplication in forms such as *nerian* ‘save’. A synchronic vowel height distinction is a possibility, but this is not the analysis that will be pursued in this thesis, since a) the vowels targeted by N-HVD and HVD are often identical synchronically, e.g. <e> in weak and strong past participles, and b) there is evidence from the adjectives in *Li*. (this study) and from the Late West Saxon nouns (Bermúdez-Otero 2005) to show that HVD certainly does not have a vowel height condition synchronically. The interaction of these two processes will become important in particular when discussing the past participles, since the strong participles are assumed to be affected by non-high vowel deletion in the handbook accounts, while the weak past participles are subject to high vowel deletion. I will assess whether the alternations found in the strong past participles are indeed the result of the ranking in (2.52), i.e., whether N-HVD still operates variably within this category.<sup>10</sup>

## 2.6. RECENT DEVELOPMENTS

Recent studies on nouns (Bermúdez-Otero 2005; Bermúdez-Otero & Hogg 2003) and on adjectives (Scott 2005) have found that the behaviour of high vowel deletion does not necessarily reflect the phonological assumptions laid out in the handbooks, and in fact can be seen changing in its phonological conditioning in many respects, with evidence of morphological conditioning. I will here give a very brief overview of an example of this, which Bermúdez-Otero (2005: §7.5) and Bermúdez-Otero & Hogg (2003) found in the nouns, that is, the targeting of apocope to a particular morphological class. These studies looked at the behaviour of nominal inflectional morphophonology, revealing changes in progress from early Alfredian West Saxon, to late Ælfrician West Saxon. One example of this is the targeting by apocope of non-high suffixes in late West Saxon. The only inflectional endings that are expected to undergo apocope in nouns are the high vowel suffixes in the *a*-stem nom/acc.pl.neut and *ō*-stem nom.sg.fem: *-u*. An analogical process replaces the

---

<sup>10</sup> Note that even this tentative analysis assumes that the constraint ranking would have to operate within a morphological category. I will discuss the issue of cophologies in Chapter 4. To allow the N-HVD ranking to operate at any stratum, unrestrained, would completely obscure the results of HVD, and is thus completely incorrect.

nom/acc.pl.neut *-u* with *-a*, yet this *-a* suffix continues to be targeted by apocope, in identical prosodic conditions as would affect the original high vowel suffix:

(2.55)

UR	/ʃip-/	/word-/	/werod-/	/wætr-/
nom/acc.sg.	scip	word	werod	wæter
nom/acc.pl.	scipu, -a	word	werod	wætera, -u
gen.pl.	scipa	worda	weroda	wætera
Gloss	‘ship’	‘word’	‘troop’	‘water’

Bermúdez-Otero & Hogg (2003: Table 3)

Bermúdez-Otero & Hogg (2003: 110) note that according to Pope (1967–8: 183) this new suffix is prevalent in Ælfrician texts. The problem raised by this is that the gen.pl. also ends in *-a*, producing forms with identical phonological form as the innovative nom/acc.pl.neut. forms. However, Bermúdez-Otero & Hogg (2003) and Bermúdez-Otero (2005: §7.5) found that the gen.pl. suffix never undergoes deletion, while the nom/acc.pl.neut. does, concluding therefore, that there cannot simply be a relaxation of the conditions of apocope. They argue instead, that this originally phonological process has had morphological conditions added to it, providing evidence for a stratal split in the grammar of West Saxon, with the nom/acc.pl.neut. being a stem level form, and oblique cases being at the word level; the domain of syncope:

(2.56) *Late West Saxon: Neuter derivations for Gen.pl and Nom/acc.pl.*

	Nom/acc.pl.	Gen.pl	Nom/acc.pl.	Gen.pl.
UR	/ʃip-/	/ʃip-/	/word-/	/word-/
Level 1 morphology	<i>scip+a</i>	—	<i>word+a</i>	—
Level 1 phonology: apocope	—	—	<i>word</i> ∅	—
Level 2 morphology	—	<i>scip+a</i>	—	<i>word+a</i>
Output	<i>scipa</i>	<i>scipa</i>	<i>word</i>	<i>worda</i>

In sum, it has been argued that the grammar in West Saxon at least, is stratified, with apocope operating at Level 1 and syncope operating at Level 2. Level 1 represents the domain at which less productive affixation takes place, namely, the nom.sg.fem. and the nom/acc.pl.neut. The lack of productivity of apocope in the nom.sg.fem., for example, can be seen by its increasing loss in Late Old English. More background on the nature of strata in Lexical Phonology and Morphology (LPM), and in Stratal OT will be given in Chapter 4.

In the adjectives (Scott 2005) there are also examples that illustrate the departure from the handbooks of the attested data. For example, according to Campbell (1959), syncope should affect the medial vowels in forms of adjectives like *hālig* ‘holy’ containing vowel-initial suffixes. However, as stated in Section 2.2.3 Campbell (1959: §643.5) notes many exceptions to this, where a medial vowel appears either due to ‘lack of syncope’, or due to ‘analogical restoration’. The data from the neuter West Saxon adjectives (Scott 2005), which are summarised in the following table, do not follow the model paradigm given in Campbell (1959: §643). Alfred (C 890–924) represents ‘Early’ West Saxon, Bald (mid 10<sup>th</sup> C) represents a transition between Early and Late West Saxon and Ælfric (between 990 and 1000) represents Late West Saxon:

(2.57). *Adjectival data for neuter hālig ‘holy’*

	Alfred	Bald	Ælfric
Nom.sg.	<i>hālig</i>	<i>hālig</i>	<i>hālig</i>
Nom/acc.pl.	<i>hāligu, -e, -a, hālig, hālgu</i>	<i>hālig, hāligu, hālgu</i>	<i>hālig, hālige,</i> <i>hālige</i>
Gen.sg.	<i>hālgēs, hāliges</i>	<i>hālgēs</i>	<i>hālgēs, hāliges</i>

(Summarised data patterns reproduced from Scott 2005)

As we can see above, there is failure of syncope in the nom/acc.pl.neut. in all three periods, yielding trisyllabic forms such as *hāligu*. Such forms are also found in the Gen.Sg. in Alfred and Ælfric. Alfred and Ælfric both show variable syncope

throughout the whole paradigm, while Bald shows consistent syncope in the oblique cases and variable in the nom/acc.pl.neut. Once again, we see a distinction between the behaviour of HVD in the nom.sg.fem and nom/acc.pl.neut. and the rest of the paradigm, reinforcing the claim that a morphological split exists between the categories. The distinction between the oblique cases and the nom/acc.pl.neut. relates to the same stratal distinction that is advanced in Bermúdez-Otero (2005). Although I will not be giving the full analysis here, I shall give a brief overview of the situation.

In relation to the findings made by Bermúdez-Otero (2005: §7.6) in the nouns the following points were noted: i) The oblique inflectional affixes never failed to trigger syncope, ii) the stem level (nom/acc.pl.neut.) inflectional affixes may fail to trigger syncope in Alfred but by Ælfric, syncope applies in the expected conditions in words like *hēafod* ‘head’ (prosodically similar to *hālig*). Therefore, in his study, Bermúdez-Otero (2005: §7.6) found two systems, which he refers to as the *hēafdu* and the *hēafodu* systems:

(2.58)

a) *hēafdu* system: Obligatory syncope throughout both levels.

(Ælfrician ‘Late’ West Saxon nouns)

b) *hēafodu* system: Obligatory syncope at the Level 2, variable syncope at Level

1. (Alfredian ‘Early’ West Saxon nouns, Adjectives of Bald)

In the adjectives, Bald’s Leechbook contains the equivalent of the *hēafodu* system, whereas the adjectives of Alfred and Ælfric exhibit a system not in place in the nouns. I refer to this as the *hēafodum* system, as it is a system within which syncope may fail in the instance of word level suffixes, including the dative:

c) *hēafodum* system: Variable failure of syncope throughout both levels

(adjectives of Alfred and Ælfric.)

While the nouns can be seen to exhibit a stratified syncopation system in Alfred, the evidence for stratification in the adjectives relies upon Bald, with Alfred and Ælfric

providing no specific evidence for stratification in with respect to syncope. Grammatical divisions in the phonology of Alfred and Ælfric do exist, however, and will be discussed further in this and later chapters. In Bermúdez-Otero (2005 §7.4) it is argued that the unsyncopated forms in the stem level nouns represent a conservative metrical pattern whose last traces are confined to the stem level in the conservative dialect of Alfred, which has been completely lost in the advanced dialect of Ælfric. It has been claimed that this conservative metrical pattern may be traced back to an ancestral pattern in West Germanic, within which words consisting of a bimoraic foot followed by two light syllables could escape syncope. This conservative pattern can also be seen in Old Saxon e.g. *managumu* (Gallée 1993: §115 Cited in Bermúdez-Otero 2005: §7.6). It is also claimed (Bermúdez-Otero 2005: §7.6) that evidence comes from the fact that many of the dialects showing such unsyncopated forms (including the Vespasian Psalter and Alfred) are older, with the consistently syncopeing dialect of Ælfric being relatively late. Interestingly, if this is the case, the adjectives may provide an insight into a more conservative class than the nouns of Early West Saxon, where the traces of this conservative metrical pattern are not yet confined to Level 1, and can instead be seen in evidence throughout both levels. There is also a recent OT analysis of the Old English weak preterite (Minkova 2012). This will be examined in detail in Chapter 7, so will not be discussed in great detail in this section. Instead, I will provide a brief overview. Crucially, this account does not employ the use of deletion-motivating constraints such as *PARSE-Ń* or *PARSE-σ*, since it is assumed that in the weak preterite of EWS the process of HVD is no longer active, and is instead lexicalised. In this account, the weak preterites are assumed to have either gained the thematic vowel as part of their underlying representation (Type-V), or to lack the vowel (Type-C):

(2.59)

Type-C (Consonantal):		Type-V (Vocalic):	
Infinitive	1/3 sg.pret.	Infinitive	1/3 sg.pret.
hǣl-an ‘heal’	hǣl-de	heri-an ‘praise’	here-de
grēt-an ‘greet’	grēt-te	lōci-an ‘look’	lōco-de
hredd-an ‘save’	hred-de	losi-an ‘lose’	loso-de
lett-an ‘hinder’	let-te	endi-an ‘end’	endo-de
cenn-an ‘give birth’	cen-de	leorni-an ‘learn’	leorno-de

(Minkova 2012: Fig. 13.2)

The forms presented in this table by Minkova (2012: 201) include not only Class 1 weak forms, but also those from Class 2. Class 2 verbs, which are assumed to be protected from deletion by their historically long vowel, simply fall under the Type-V category in Minkova’s account. No HVD is assumed to exist in the grammar to disturb these lexicalised patterns; though it is assumed that certain other phonological factors influence the occurrence of the vowel. For example, the form *timbran* ‘build’, is assumed to be Type-C, but the inflected non-vocalic preterite form *\*timbrde* is prevented since the resulting consonant cluster is unsyllabifiable. The vowel in *timbrede* is therefore assumed to be epenthetic. I will argue instead that the dialects under observation in this thesis do not show lexicalisation of HVD in the weak preterite or in the weak past participle, and will therefore pursue an account that assumes HVD to be a weight-conditioned active process that removes unfooted light syllables.

## 2.7. CHAPTER OVERVIEW

In this chapter I have introduced two processes: HVD and N-HVD, and have demonstrated that neither process behaves in the regular manner implied by model paradigms. In Section (2.4), the basic assumptions regarding foot structure and prosody in OE, upon which the later analyses rely, have been discussed, and a basic OT analysis to motivate the processes in question has been presented. We have seen,

in Section (2.6), that recent OT literature on HVD recognises the need for morphophonological interaction in accounting for HVD, and that the process is agreed to be in a state of delicacy. This ranges from the noun analysis in Bermúdez-Otero 2005, and in Bermúdez-Otero & Hogg 2003, in which the grammar is argued to be stratified, with apocope becoming restricted to Level 1, to the analysis of the weak preterite in Minkova (2012), in which it is argued that all phonological robustness has gone, and that the alternations are lexicalised. In contrast, the traditional analyses, as found in Campbell (1959) assume that the process operated with Neogrammarian robustness, and that analogy later disturbed the paradigms. It has become clear that where forms do not fit the expected pattern, analogy is assumed to be responsible. For example, we saw that regarding syncope in the past.part., Campbell (1959: §751.3) states that an analogical process causes syncope to be extended to uninflected forms which end in a dental e.g. *gehȳd* ‘hidden’, while also levelling out the unsyncopeated form to past.parts which do not end in dentals: *gelīefede* ‘believed’. A concern that I began to raise above is that an ‘analogical’ process, in this case, appears to be causing both underapplication and overapplication of a phonological process, apparently causing less regularity in relation to the incidence of the medial vowel rather than more. It is therefore necessary to discuss the issue of analogy further in order to ascertain what exactly it is that Campbell (1959), Wright & Wright (1925) etc. mean when they refer to it, and the theoretical implications of such analyses. This will be the focus of Chapter 3.





## CHAPTER 3

### The issue of analogy: implications for the analysis

#### 3.1. INTRODUCTION: THE PROBLEM OF ANALOGY

Many of the traditional grammars of Old English (e.g. Campbell 1959, Wright & Wright 1925 etc.) describe phonological processes such as high vowel deletion in a way that appears to presume that phonological rules are totally robust and productive, or are not in place at all. In this framework, the alternative forms are stored lexically, and new forms that follow this pattern are thought to be analogical. This chapter will be divided into two parts. Firstly, I will discuss exactly what it is that the Neogrammarian handbooks refer to when they talk of analogy. I will go on, still in part one of the chapter, to reflect on the debate (Sturtevant 1947, Vincent 1974 etc.) that has continued throughout the later 20<sup>th</sup> Century regarding how analogy should be restricted. I will also consider how these differing views of analogy affect the analysis of Old English morphophonology. In the second part of the chapter, I will move onto the current status of the analogy debate, discussing the extent to which the restrictions suggested by Vincent (1974) etc. are employed in modern morphophonological theory. I will, in this section bring in insights from more recent phonological theory including OT. Finally, I will discuss and define my usage of the term and its implications for the later analyses.

#### 3.2. ANALOGY: THE HISTORICAL DEBATE

In this section, I will be concerned primarily with the following three major issues with analogy:

- i) Definition of analogy:* In defining analogy we can look a) from a symptomatic perspective, i.e. what behaviour suggests that a form is analogical, and also b), from a causal perspective, i.e. what is the motivation for analogy?

ii) *Sturtevant's paradox* (Sturtevant 1947): Is all sound change regular, and all analogical change irregular and sporadic?

iii) *Directionality*: Why are certain forms liable to be affected by analogy?

Which forms are likely to be the model for analogy?

To begin, I will consider the basic question of what analogy is, against a traditional backdrop. I will go on to discuss how the conflicting views of analogy sit in terms of attested morphophonological processes. This will provide a suitable backdrop for the analyses in Chapters 6–8, and will allow us to see whether and when it is indeed sensible to describe exceptions to processes such as HVD in Old English as analogical.

### 3.3. WHAT IS ANALOGY?

In this section I will instead give an overview of what analogy means in a traditional sense (as used by the Neogrammarians), and the suggestions that have been made to constrain it. I will then move on to a discussion of the theoretical developments and competing hypotheses, which attempt to account for some of the problematic examples that appear troubling for the Neogrammarian definition.

Vincent (1974) sums up the way in which analogy is used by traditional historical linguists. About sound laws, he states:

“In situations where there were sets of residual exceptions for which no explanation could be found the Neogrammarians offered two types of factor: linguistic borrowing and analogy.” (Vincent 1974)

In light of this evaluation, it seems to be the case that analogy is used very much as an ‘elsewhere’ description of exceptions. It is also clear that the Neogrammarians did not require a morphological process to fulfil any particular conditions to qualify as analogical. Analogy, if used in this way to describe exceptions to phonology, does not appear to be particularly interesting. However, in later sections I will argue that

analogy in fact is linguistically interesting, but must be constrained. The generality of this usage has been criticised in the literature (e.g. Lehmann 1962; Kiparsky 1965 etc.). The risk is, as noted by King (1969) that if analogy is allowed to become a catchall for exceptions to sound change then important sound changes may be overlooked. For example, instances of morphologisation cannot be fully explored when analogy and phonology are kept separate.

Two types of analogy, both known as *systematic processes* (Hock 1991: §9.1) are relevant to Old English morphophonology; *levelling* and *four-part analogy*. Levelling refers to a type of analogy that operates within a morphological paradigm, resulting in a more level paradigm. In the event of a proposed case of levelling, we should look for a resulting morphological regularity, which does not consider phonological factors. On the other hand, *four-part analogy* represents analogical extension:

$$(3.1) \quad \text{werod} : \text{werod} = \text{hēafod} : X \\ X = \text{hēafod} :$$

The above equation comes from Luick (1964: §307), and is criticised in Bermúdez-Otero (2005: §7.1) for the way the forms taken to be the basis of analogy can be posited on an *ad hoc* basis. A four-part analogical process must operate upon forms that have a pre-existing relationship of synchronic derivation between a basic and derived form (Hock 1991: 172).

In sections 3.5–3.7 I will present some examples from Old English morphophonology, which show some of the issues that we are left with should we allow all such exceptions to be accounted for by analogy. Vincent (1974) argues that it is necessary for traditional analogy to be constrained, but not dispensed with, and therefore posits three generalisations which are based upon the laws of Kuryłowicz (1949) and the tendencies of Mańczak (1980), which attempt to constrain the application of analogy:

### *Vincent's (1974) three generalisations*

- a) Basic categories are more likely to be the model for analogy than more marginal ones. Morphological markedness therefore affects the direction of change.
- b) Longer, more overt markers of morphological categories are favoured above weaker, shorter ones.
- c) Redundancy of information will tend to be eliminated, and also, within a paradigm, alternations are not favoured, so will be prone to levelling.

Adapted from Vincent (1974) and McMahon (1994).

These three points deal largely with predicting the direction of analogical change (point (c) above) including which forms are more likely to be prone to analogical change, and which forms are 'salient', and likely to be the model for analogy. Even the term salient is problematic; within a paradigm, are we referring to the most frequently occurring form, the most common form within the paradigm, or something else? Vincent's point 3a) indicates that basic (for example, underived) forms are likely to be salient, though this is only a tendency.

Vincent's point 3c) is of particular importance in the study of Old English inflectional morphophonology, which is often focussed upon the interaction of phonology with inflectional paradigms. We should therefore expect, though it is not a hard and fast rule, that analogical processes will be bringing forms within a paradigm in line with a salient (and likely *basic*, see point 3a)) form, creating a levelled paradigm. Analogy should therefore usually not produce irregularity.

### 3.4. ATTEMPTS TO REMODEL ANALOGY

Analogy is a morphological change, which is not expected to be sensitive to phonological processes. Analogical change can be rather sporadic and irregular, and conversely, results in regularity. This relationship, particularly between sound change and analogical levelling, has been referred to as *Sturtevant's Paradox* (Anttila 1972), based upon the following statements (Sturtevant 1947):

*Sturtevant's Paradox* (Sturtevant 1947)

Phonetic laws are regular but produce irregularities.

Analogic creation is irregular but produces regularity.

This traditional distinction between sound change and analogical change has been challenged with two arguments; one that claims that many sound changes show grammatical conditioning (Hermann 1931), and another that argues that sound change is in itself a form of analogy (e.g. Sturtevant 1885, 1917). The *sound change as analogy* theory (Sturtevant 1885) claims that there are many parallels between analogical change and sound change, in that a sound change is spread through the lexicon, and the speech community by imitation. Under this framework, the imitation differs from analogical imitation only in the fact that sound change spreads on the basis of phonetic (rather than semantic) similarity. This theory does not account for the differences between morphological change and sound change. For example, many sound changes such as high vowel deletion do not create regularity, even of the phonological sort. This is due to the fact that sound changes are driven by many other factors, for example, prosodic constraints imposed within the grammar, rather than the need to be similar phonetically to any other form.

The *grammatical conditioning* hypothesis (Hermann 1931) allows for analogical conditioning of sound change *as it is taking place*, rather than only allowing for analogical repair after sound change has completed. Hock (2003) argues that this position cannot replace the Neogrammarian approach in which sound change operates regularly, allowing analogical repair to proceed after its completion, since there are examples which are better accounted for using the traditional

framework (e.g. Finnish apocope, Anttila 1972: 80), as well as examples which require the free interaction of phonology and morphology.

Hock (2003) posits a hypothesis that attempts to reconcile the idea that sound change and analogy cannot be neatly separated with the fact that many sound changes do proceed with Neogrammarian regularity. His approach aims, therefore, to allow some sound changes to exhibit the morphological or semantic elements of analogy, while allowing some analogical changes to exhibit the regularity usually associated with sound change. Hock (2003: 455) assumes that such differences of behaviours can be connected to the domain in which the changes operate. Therefore, a sound change will proceed in a regular Neogrammarian fashion if it is in a large domain that is unconstrained by non-phonological information. Hock also predicts that dissimilation and metathesis, which are notoriously irregular, might be regular under this framework *if* they are conditioned within a phonetic or phonological domain. The phonological processes which show grammatical conditioning involve a sound change that is operating in a restricted domain. Hock therefore predicts that such changes will show a similar level of regularity to similarly restricted *four-part* analogical processes. This hypothesis is useful in accounting for apparent violations of *Sturtevant's Paradox*, and allows for the possibility of analogical change interacting directly with the phonology. However, as Hock (2003) notes, it is not clear why certain sound changes appear not to allow morphological interaction and others do. Also, this position makes no mention of cases of morphophonological interaction that do not appear to involve analogy. As stated by King (1969), analogy has been used to simply describe anything that does not fit in with a regular sound law. The question of whether all morphophonological interaction should be called analogical is still relevant when we consider, for example, morphologisation; when a phonological process becomes restricted by morphological information. Morphologisation is a process which clearly contradicts the Neogrammarian position of absolute regularity of sound change + subsequent analogy. However, it cannot always be described as a phonological/analogical interaction. Morphologisation arises when unsustainable levels of opacity force morphological conditions to be added, or to replace the phonological conditions (as described in Anderson 1988). In certain cases, such processes of morphologisation show morphological conditioning

that does not match the usual tendencies of analogy. This is problematic if we are to hope that such tendencies will provide a method of constraining the use of analogy as a descriptive tool.

### 3.5. ANALOGY IN OLD ENGLISH PARADIGMS

As noted above, in Campbell's (1959) *Old English Grammar*, the descriptions of inflectional paradigms assume a Neogrammarian framework, under which phonological processes are productive and cannot be affected by morphological information. Within this framework, examples that appear to be the result of a phonological process being conditioned, lexically or morphologically, are assumed to be analogical. In this section I will discuss some examples from the nouns and verbs which have been referred to, either explicitly or implicitly, as analogical in the Neogrammarian handbooks, but that do not sit well with some of the defining aspects of analogy discussed above.

### 3.6. VERBS: DENTALS IN THE WEAK PAST PARTICIPLE

In Chapter 2 I very briefly raised the issue that it is possible that an interesting phenomenon involving the behaviour of syncope in the past.part. in verbs may be being overlooked in the handbooks. I will now go into slightly more detail about the situation, though a full account of the process is to be found in Chapter 8. According to Campbell (1959: §752), past participles should display the results of syncope of *-i-* in open syllables after long root syllables in inflected weak *-ed* forms, in line with the classic description of high vowel deletion:

(3.2)

Uninflected	Plural (masc.)	
<i>getrymed</i>	<i>getrymede</i>	short root syllable - no syncope
[ <sub>o</sub> [.try.me.]d]	[ <sub>o</sub> [.try.me.].de.]	
<i>gelæded</i>	<i>gelædde</i>	long root syllable - syncope
[ <sub>o</sub> [.læ:.].ded.]	[ <sub>o</sub> [.læ:d.].de.]	



These forms represent a normal deletion pattern. The medial vowel cannot be syncopated in the uninflected form in *getrymed* because it is incorporated into a disyllabic foot, and is thus not a target. In *gelæded*, the medial vowel is unfooted, but is part of an unfooted *closed* syllable, and therefore should not be targeted by syncope. In the plural form of *gelæded* however, the unsyncopated form does contain an unfooted light syllable: [ω[.læ:.].**de**.de.], so syncope proceeds. This is the pattern reflected in the Mercian dialect of the Vespasian Psalter (Campbell 1959: §752), and as we will see in Chapter 7, also in the Lindisfarne Gospels, though Campbell (1959: §752.3) notes that in Lindisfarne, syncope is often eliminated in the inflected forms. However, in West Saxon, forms such as uninflected *gelæded*, which include a dental, may be targeted by syncope e.g. *gelædd*. This is described by Campbell (1959: §752) as an ‘extension’, representing analogical change. Phonologically, this overapplication flouts many of the restrictions upon syncope, one being that syncope is not expected to repair unfooted syllables unless they are light; closed syllables are protected. This is a condition that is never broken in the nouns (see Bermúdez-Otero 2005) or the adjectives (Scott 2005). Also, this deletion creates an unfavourable superheavy VVCC cluster. Furthermore, parallel to this overapplication is a case of underapplication, also assumed to be analogical in Campbell (1959): Participles that do not have a dental, according to Campbell (1959: §752) ‘level out’ the unsyncopated form to the inflected cases:

(3.3)

*gehælede*

uninflected

plural

*gehæled*

*gehælede*

long root syllable (syncope expected)

[ω[.hæ:.].led.]

[ω[.hæ:.].**le**.de.]

As shown above, the unsyncopated form fails to repair the unfooted light syllable. This may point to a case of lexicalisation, where syncope in the past participles in EWS has become associated with lexemes with the features [- continuant], [+coronal, [+ anterior], though this is not the argument that will be pursued in

Chapter 7, in which the dental conditioning will be argued to be phonological. In this section I will consider the validity of the analogical explanation. In order to do so, it is necessary to consider whether this, is if it a case of analogy, acts in accordance with the tendencies outlined earlier in this chapter. More specifically we must ascertain, i) what the source for this analogy is, ii) whether the change is irregular, and iii) whether it creates regularity.

Question i) is probably the most difficult to answer, particularly as even within just the weak past participle, both a syncopated and an unsyncopated form is produced by 'analogy'. In answer to ii), in West Saxon, the targeting of dental forms is highly regular, with almost all dental forms being affected. This is perhaps one of the most problematic facts about this change with respect to analogy, and is one motivation for suggesting that it is the result of a reasonably robust phonological pressure. I would argue, in relation to question iii), that this process does not create regularity within the paradigm, as the past participle appears to be behaving differently with respect to its application of syncope to the rest of the paradigm. Instead, the similarity which binds the forms that are susceptible to the 'extension' or 'levelling out' of syncope is the place of articulation of the stem final consonant. This is highly problematic; as Hock (1991: 172) states:

"Proportions based on purely phonetic/phonological similarities such as the one between ring (verb) and king (noun)...do not normally give rise to analogical developments."

It is also necessary to ask whether this is synchronically a case of high vowel deletion in any sense. The weight conditions remain unfulfilled, indicating that morphologically conditioned phonologisation has taken place. This will be discussed in Chapters 8 and 9.

### 3.7. NOUNS: APOCOPE OF NON-HIGH VOWELS

In an example from two recent studies (Bermúdez-Otero 2005, Bermúdez-Otero & Hogg 2003), there is a process of the apparent overapplication of apocope. The vowel that is targeted by apocope under normal circumstances, as is explained above,

is the nom/acc.pl.neut. *-u*. High vowel deletion removes high vowels which create an unfooted light syllable. A process of analogy, that is, one which is morphologically driven, replaces this *-u* with *-a* in Ælfrician Late West Saxon. The problem is that this new suffix is consistently deleted in Late West Saxon, under the same prosodic conditions as would affect *-u* (see Bermúdez-Otero 2005: §7.5). Bermúdez-Otero (2005: §7.5) argues that it is not possible that the conditions for high vowel deletion have simply been relaxed to include non-high vowels, as the gen.pl. form is *-a*;, which is phonologically identical to the innovative nom/acc.pl.neut. and does not delete. Campbell (1959) does not refer specifically to the *deletion* of this innovative suffix as analogical, however, it is worth considering how this could be accounted for in a Neogrammarian framework. Why should deletion have certain conditions in one morphological case, and others in another case? It seems fair to assume that analogy would be held responsible under the traditional framework. Analogical overapplication of high vowel deletion as an explanation for this situation would raise some crucial questions. Very importantly, this process of deletion is phonologically conditioned, and still applies in the original prosodic environments. Under the traditional definition of analogy this is not allowed to happen, since the morphology and the phonology are treated as separate. Also, to assume the overapplication to be analogical would require an analogical process that results in a zero plural, which is contrary to Vincent's (1974) generalisation (2) above. By allowing the explanation of a process as analogical to be so unconstrained, we risk a 'catch all' account. When a process that appears to flout some of the most commonly agreed conditions of analogy is still labelled as analogical, we are left with a situation where either our understanding of analogy is greatly incomplete, or the process in question is being misplaced. Either outcome appears to be unhelpful to linguistic investigation.

So far my discussion of the ways in which analogy has been used to describe Old English patterns has been limited to the Neogrammarian handbooks such as Campbell (1959). In the next section I will move onto a recent explanation dealing with analogy in Old English by Fulk (2010).

### 3.8. ANALOGY: ITS USE IN MODERN MORPHOPHONOLOGY

In the last section we saw that there have been many beneficial developments in the description and constraining of analogy since the Neogrammarians. The problem has been, however, that attempts to posit universals (e.g. the laws of Kuryłowicz 1949) have been unsuccessful, causing scholars to argue that such universals must be relaxed into tendencies (Mańczak 1980). Although these tendencies are of great interest linguistically, it is clear that in order to truly understand what analogy is, how it occurs, and ultimately, to predict when it will occur, more research is required. In our case, in the discussion of Old English morphophonology, the problem with leaving the debate at the tendency stage is firstly that it becomes very difficult to be sure whether it is fair to say that a given process is analogy. Although the tendencies do provide some level of restriction, their relative weakness means it would still be possible to some extent to suggest that ill-fitting forms are the product with analogy, following the Neogrammarian pattern. For example, if the ‘analogy’ producing a particular form contradicts the majority of the above tendencies, can it be analogy? How many tendencies is it permissible for analogy to break? Secondly, a more general issue; when it is argued that a phenomenon is the result of analogy, the account comes to rest on the definitions and assumptions regarding analogy, and is therefore weakened if these assumptions are too general.

In this section, therefore, I will build on the debates raised in the last section, and ask the following specific questions in the hope that analogy can be more precisely defined:

- i. Analogy might aim to eliminate a) irregularity within a paradigm, but it might also aim to eliminate b) redundant information, or c) non-overt morphological info. Either b) or c) could easily contradict a). Which one wins?
- ii. Are these differences due to the priorities of a language? Does analogy proceed in the same way cross linguistically?
- iii. How can analogy be modelled linguistically? Is analogy free to interact with phonology?

While investigating these questions, I will also discuss recent accounts of analogy, from two perspectives. The first perspective (Fulk 2010) is largely data-focussed and involves an account of Old English. In this account it is argued that a phonological process should be described in a way that is different from the consensus, and that many forms originally thought to be the result of phonology are actually analogy. The account is not specifically concerned with the definition of analogy, but does entail some specific assumptions of how analogy can proceed. The second recent account I will discuss, in contrast to Fulk, is concerned more with the remodelling of analogy itself (Albright 2008).

### 3.9. RECENT USE OF ANALOGY IN OLD ENGLISH RESEARCH

A recent analysis (Fulk 2010) of high vowel deletion in Old English claims analogy to be the cause of many of the outputs historically viewed as the results of high vowel deletion. Fulk suggests that anything other than *hēafudu* is analogical. Firstly, it is necessary to assess whether the phonological premise of this is correct, and secondly, is the analogy explanation satisfactory?

Fulk (2010) discusses the extent to which the results of high vowel deletion can be assumed to represent a true phonological output for the process. Fulk notes that many scholars have required high vowel deletion to be divided into two separate rules; apocope and syncope. This is due to the fact that in forms with two consecutive syllables that would be targeted by high vowel deletion the correct result can be predicted only by ordering apocope before syncope. For example, in a *ja*-stem neuter plural noun such as *rīcu*, the application of syncope before apocope would result in the following development: *\*rīciu* > *\*rīcu* > *\*\*rīc*, with syncope creating the conditions for apocope to apply, whereas with apocope ordered before syncope, the correct outcome would occur: *\*rīciu* > *rīcu*. Concerning the question of whether high vowel deletion must be analysed as two separate processes high vowel apocope (HVA) and high vowel syncope (HVS), Fulk does not claim that it is necessary to separate them, but does so to ensure clarity. Fulk discusses two views of high vowel deletion, which he goes on to claim are untenable. The first of the two

accounts is the received view as found in Campbell (1959), Luick (1914–40) Hogg (1992) etc. Traditionally, forms such as West Saxon *rīcu* and *hēafdu* ‘heads’ are assumed to be the phonological outputs of high vowel deletion. Exceptions to the rule, such as nom/acc.pl.neut. *nītetenu* ‘beasts’ *\*nīetnu*, are assumed to be immune to syncope due to their medial syllable bearing secondary stress (e.g. Campbell 1977: §351). Fulk, following Sievers (1898) points out that the assumption that syncope was regular in Old English is surprising since the older texts, including the Vespasian Psalter do not show syncope in the nom/acc.pl.neut. and nom.sg.fem.. The second account that Fulk rejects is Ringe (2002), in which an alternative analysis is presented that assumes that when a word provides the environment to trigger both HVA and HVS, both processes apply, resulting in, for example, *\*hēafd*, which is analogically reformed to *hēafdu*. Fulk rejects this on the basis that *\*hēafd* never surfaces in any dialect.

Another complication investigated in Fulk (2010) is the effect of syncope upon disyllabic forms ending with a sonorant. These disyllabic forms can be distinguished from historically underlyingly monosyllabic forms which gain a syllable when unaffixed through Sonorant Syllabification, such as *fīnger* /fīngɾ/ ‘finger’.<sup>11</sup> According to Fulk (2010: 131), this historical distinction is of little consequence, as syncope and sonorant syllabification interact to provide parallel alternations, resulting in identical underlying representations synchronically. However, Fulk observes another complication, which is that highly sonorous /r/ appears to be distinct from the other final sonorants in terms of its syllabicity, since it is written as <er> significantly more commonly than /l/ or /n/, to the extent that it seems to be the case that only /l/ and /n/ may have been non-syllabic. Therefore, Fulk states that West Saxon must have maintained a distinction between underlyingly monosyllabic and underlyingly disyllabic forms containing a final sonorant other than /r/. In Lindisfarne /n/ is also written with a vowel before in uninflected forms, indicating that, like /r/, it is underlyingly syllabic. The Vespasian Psalter preserves the monosyllabic/disyllabic distinction in the nom/acc.pl.neut. and nom.sg.fem., but not in the other cases and numbers, within which the distinction is obscured,

---

<sup>11</sup> Fulk (2010: 131) assumes that the choice between Sonorant Syllabification and parasiting (as found in Campbell 1959) is of no consequence for the analysis.

potentially allowing for identical underlying representations. Fulk claims that there does exist evidence for the phonological output of HVS in the Vespasian Psalter and Lindisfarne Gospels<sup>12</sup>, while in West Saxon he assumes the outputs traditionally portrayed in the grammars to be heavily conditioned by analogy. Rather than assuming analogy from *hēafð* to *hēafdu* in West Saxon, as stipulated in Ringe (2002), Fulk assumes the result of HVS to be *hēafodu* in the nom/acc.pl.neut., as found in the Vespasian Psalter, and that analogy produces the form *hēafdu* in West Saxon, and variable *hēafod* in Mercian.

### 3.10. THE RINGE (2002) ACCOUNT AND FULK'S TREATMENT

The behaviour of High Vowel Deletion in West Saxon depends crucially upon word class, raising the question of why deletion should behave differently in, for example, verbs and nouns, and also the question of which behaviour represents the 'true' phonological output of HVD, as opposed to showing morphologisation etc. This issue has led various studies towards significantly different treatments of HVD. For example, Fulk discusses a recent alternative explanation (Ringe 2002) in which it is assumed that the true phonological output of high vowel deletion when affecting *hēafudu* should be *hēafð*, and that *hēafdu* represents an analogical reformation. Fulk (2010) points out that Ringe's analysis of West Saxon, assuming *hēafudu* - *hēafð* - *hēafdu* relies upon evidence from other word categories, including the 2<sup>nd</sup> and 3<sup>rd</sup> pres.sg.ind. verbs, within which prosodic formations such as *hēafð* may surface. Such evidence is problematic, as it leads to the assumption that the behaviour of a phonological process in one word class has implications for the analysis of the same phonological process within another word class. This is a relationship that must be investigated with great care, and it is necessary to ask how reliable evidence from the present indicative verbs is for basing the analysis of high vowel deletion upon. Also, why assume that verbs and forms such as *milts* 'mercy' are more relevant than the disyllabic forms found in *a*- stem nouns? The following sub-questions are useful in ascertaining whether this evidence is relevant: a) Is there evidence that High Vowel Deletion is active in the strong indicative verbs? If the answer is not clearly

---

<sup>12</sup> For the Lindisfarne Gospels, Fulk limits citation of evidence to the past participles.

affirmative, it is not clear that the verbs do indeed represent the phonological output of HVD. Other accounts of HVD, rather than assuming, as Ringe does, that verb syncope provides evidence for a *hēafd* output in nouns, including Hogg (1992) and Campbell (1959) assume that the syncope in West Saxon verbs ‘passes its usual limits’ (Campbell 1959: §347). This is on account of the fact that it is i) allowed to create superheavy syllables (Hogg 2000); something that is not permitted in the nouns, and ii), that it often applies after light stems. It is therefore clear that it is equally possible to view syncope as overapplying in the verbs, in which case it is dubious to assume that syncope in the verbs can be used to justify a treatment in nouns that involves the opacity of non-surfacing outputs such as *hēafd*. Fulk argues against Ringe’s treatment due to the fact that much of the evidence cited by Ringe, such as *milts etc.* have unclear etymologies, and may in fact not show the application of both HVS and HVA, as required for Ringe’s analysis. Although it is true that i), the ability for HVD to produce superheavy syllables in verbs may present evidence that the language does not contain the restrictions upon syncope seen in the nouns, allowing the *hēafd* analysis presented in Ringe (2002), the other verb-specific property of syncope, ii), the ability to apply after short syllables, presents problems for this analysis. This is due to the fact that it reflects a compromised phonological output in the verbs, with the original weight conditions failing to be satisfied. The verbs could just as easily, therefore, be used to justify a treatment in which short syllables such as *werod* undergo syncope followed ‘analogical restoration’, which is clearly not an ideal analysis, as syncopated forms such as *\*werdu* are not attested in either West Saxon or Lindisfarne.<sup>13</sup>

b) Secondly, although I will not investigate this question in more depth here, it may also be useful to ask whether there is any independent evidence to suggest that the lexical category in question is more likely within Old English to preserve phonological processes.

I will now move onto the account that Fulk provides, which assumes that *hēafdu* in Late West Saxon is the product of analogy, rather than of HVS.

---

<sup>13</sup> Reanalysis as monosyllabic in Lindisfarne can occur when there is a final sonorant.



### 3.10.1. Analogy in Fulk's Treatment

Fulk's article makes a number of claims and observations regarding the behaviour of high vowel deletion, sonorant syllabification and analogy. The most salient of these are:

1. The plural neuter *ja-* stem *rīcu* need not be, and most likely *should* not be seen to be the phonological output of HVD. This is due to the fact that the medial *-i-* is likely to have been lost due to factors other than high vowel syncope.
2. The *West Saxon* form *hēafdu* is not the phonological result of HVD, but instead is an analogical formation. This is also the claim for the nom/acc.pl.neut. Mercian form *hēafod*.
3. The *Vespasian Psalter* is phonologically conservative, reflecting HVD in its truly phonological form.
4. The forms ending with an obstruent+sonorant cluster in the *Vespasian Psalter* can be classified as distinctly underlyingly mono- or disyllabic in line with their etymology on the basis of evidence from the nom/acc.pl.neut. However, this is only true of /l/ and /n, m/, as forms in /r/ are always underlyingly disyllabic.

Point (1) is compelling; as there appear to be a number of reasons to view the idea that *rīcu* is the product of syncope as dubious. According to Sievers (1898: §177), *\*i* in *\*rīkiu* may have developed into *\*j* relatively late and have been lost in the same way as the original *\*j* in Proto Germanic *\*rīkijō*, therefore being unrelated to HVD. Although Fulk points out that this analysis is only a possibility, he also suggests that even if it is not the case, the *-iu-* would have been likely to become a diphthong, which would have been likely to be reduced analogically to *-u* due to the fact that nom/acc.pl.neut. *-iu* would be highly unusual. Taking both of these possibilities into account, it certainly appears to be the case that evidence involving forms such as *rīcu* should be viewed with caution.

Points (2) and (3) are perhaps the most significant within the article. Fulk claims that when the *Vespasian Psalter* nom/acc.pl.neut. forms show no syncope or apocope, there is no need to analyse it as underapplication. This is because the target for apocope, *-u*, follows a heavy + light syllable rather than the single heavy or light

+ light combination. Syncope, on the other hand, applies regularly in all but the nom/acc.pl.neut. which is due, according to Fulk, to the etymological lightness of the *-u* suffix. It is significant that the Vespasian Psalter retains syncope in target environments within other cases, and also that the distinction between monosyllabic and disyllabic forms is left intact. However, assuming the normal application of HVD to be *hēafodu* leaves WS *hēafdu* and VP *hēafod* to be accounted for, and in both cases, the account given by Fulk (2010: 138–139) is analogy. In the case of the West Saxon form, the analogy brings the *-u* form in line with the rest of the paradigm (including, for example, *hēafdes* etc.). This is not too problematic, but the analogy in Mercian, which brings *hēafodu* in line with the apocopated light stems such as *werod* ‘troops’ is more problematic. As pointed out in Hogg (2000: 370), analogy in the direction of *hēafod* would reduce the overt morphological distinction between the singular and plural. Additionally, this analogy does not affect *nīeten*, and since the analogy in question comes from outside of the *hēafod* category, from the *werod* category, it is unclear why it should not affect *nīeten* types.

Although in many ways HVD in Mercian appears to be robust, and according to Fulk, more robust phonologically than HVD in West Saxon, there is one way in which the deletion process in West Saxon appears potentially to be more robust. This is that according to Fulk (2010: 133) syncope is permitted to apply frequently after *light* stressed syllables. This is a significant relaxation of the original phonological conditioning. It is also worth noting that this has implications for Fulk’s claim that although HVA and HVS are divided for the sake of clarity, there is no phonological necessity in terms of the analysis for this division. It does not appear to be the case that HVA may apply after a single light stressed syllable.

Point (4) is a fascinating phenomenon, particularly in Lindisfarne within which it is assumed that the final sonorants which are underlyingly syllabic are the highly sonorous /r/ and the less sonorous /n/, with /l/ and /m/ behaving as ‘normal’ sonorants; being syllabic or non-syllabic on the basis of their etymology. This slightly skewed relationship with sonority is also seen in Modern German,<sup>14</sup> in which in adjectives show syllabic /r/, /n/ but not /l/:

---

<sup>14</sup> The German phenomenon will be discussed in Chapter 4.

### (3.4) Adjective stems:

	/N/	/l/	/r/
Comparative -er	trocken+er 'drier'	edl+er 'more noble'	heiter+er heitrer 'more cheerful'
Plural -en	die trocken+en	die edl+en	die heiter+en heitr+en

It will be of great interest to see whether there is in Lindisfarne, like German, word class conditioning regarding this alternation. One potential problem, however, is that in the light stems traditionally seen as underlyingly monosyllabic, the Lindisfarne data contradicts the assumption that underlying final /r/ in such forms is syllabic, as acc.pl.neut. acc.pl. *wætra* Mt. 14.28, *wætro* Mk. 9.22 can only come from an underlyingly monosyllabic representation. Further contradictions within Lindisfarne come from the strong past participles ending in *-en*, from which there is evidence that monosyllabic underlying representations are present. This will be explained in Chapter 8.

#### 3.10.2. Summary: implications for analogy

Two claims of particular interest regarding analogy in Fulk (2010) are:

- The *West Saxon* form *hēafdu* is not the phonological result of HVD, but instead is an analogical formation. This is also the claim for the nom/acc.pl.neut. Mercian form *hēafod*.
- The *Vespasian Psalter* is phonologically conservative, reflecting HVD in its true phonological form.

Fulk claims that when the *Vespasian Psalter* nom/acc.pl.neut. forms show no syncope or apocope, there is no need to analyse it as underapplication. This is because the target for apocope, *-u*, follows a heavy + light syllable rather than the single heavy or light + light combination. Syncope, on the other hand, applies regularly in all but the nom/acc.pl.neut. which is due, according to Fulk, to the etymological lightness of the *-u* suffix. It is significant that the *Vespasian Psalter*

retains syncope in target environments within other cases, and also that the distinction between monosyllabic and disyllabic forms is left intact. However, assuming the normal application of HVD to be *hēafodu* leaves WS *hēafdu* and VP *hēafod* to be accounted for, and in both cases, the account given by Fulk (2010: 138-139) is analogy. In the case of the West Saxon form, the ‘analogical’ *hēafdu* brings the *-u* form in line with the rest of the paradigm (including, for example, *hēafdes* etc.). It also removes a phonological contrast that is morphologically redundant, while leaving intact the overt morphological distinction. In short, though *hēafdu* might not be analogical, and there is certainly no consensus in support of Fulk’s assertion, there is nothing *wrong* with an analogical explanation in this case, as analogical *hēafdu* satisfies even restrictive models of analogy. The problem is, as pointed out in Hogg (2000: 370), that this requires the Mercian form *hēafod* also to be analogical. Even if we assume that the phonological output of HVD is *hēafudu*, is it acceptable to describe *hēafod* as analogical? It does not create paradigm uniformity, it does not remove redundant phonological contrast and most importantly, it actually removes the overt phonological marking, as analogy in the direction of *hēafod* would reduce the overt morphological distinction between the singular and plural. Additionally, this analogy does not affect *nīeten*, and since the analogy in question comes from outside of the *hēafod* category, from the *werod* category, it is unclear why it should not affect *nīeten* types. To view this as analogical has serious implications for the concept of analogy, as it contradicts nearly all of the tendencies and restrictions imposed upon analogy by scholars aiming to describe analogical change.

### 3.11. ALBRIGHT’S (2008) APPROACH

Albright (2008) addresses the issue of universality in analogy, noting that in the literature many tendencies of analogy have been described, but that not only is the direction of analogy unpredictable, but also, analogical change can be based upon marked forms (Albright 2008: 148). For example, Albright draws attention to a case of analogy in Yiddish, in which a paradigm is levelled on the basis of a marked plural form that is less frequent than the singular forms (Albright 2008: 148). According to Albright, the common reaction to examples like this in the literature

has been to stress that the tendencies proposed for analogy are not and cannot be universal laws. This approach, Albright notes, does not satisfy the aim of truly explaining language change.

Albright discusses two approaches to analysing analogy. The first of these is the grammar-based approach. The idea, put forward by Paul (1920), Kiparsky (1968) and King (1969) is that the basic aim of analogy is to simplify the grammar. Therefore, various forms of analogy that might seem to contradict the tendencies described in section 3.3, such as the removal of redundant phonological information or the need to have overt morphological distinctions can be seen to be fulfilling this aim. Under this approach, Albright notes that even the Yiddish example in which the predictions and tendencies of analogy appear to be contradicted may prove less problematic. This is because although the base for analogy is marked, the outcome of analogy for the paradigm is in line with the prediction that the grammar will be simpler. Albright does not, however, adopt this position, and claims that there are some analogical changes that cannot be seen to result in grammatical simplification. In addition to this problem, there is also a lack of predictive power in this account. This is due to the fact that although it may usefully predict that analogy causes structural simplification, it does not predict how.

On the one hand, this is beneficial, as this single motivation for analogy ties together the seemingly contrasting ways in which analogy might proceed. Additionally, accounts that do attempt to predict exact restrictions for analogy have been shown to be incorrect without some kind of weakening statement that the restrictions can only be tendencies. Despite this, it remains true that this approach does not provide much more insight into the explanation of analogy as a universal process. In order for this to be improved, it would be necessary to delve deeper into the question of what kinds of simplification are preserved, which opposing forces take priority over analogy and when, which forms are likely to be bases for analogy, and why, and finally, whether these questions are able only to be answered in a language-specific context.

So far, we have a contrast between a set of descriptive tendencies (Mańczak: 1980) of analogy, outlined above, and an approach in which a deeper overarching law of analogy is proposed. However, as stated above, Albright claims that

grammatical simplification itself is more of a tendency, as counterexamples exist. In relation to one of the tendencies posited by Mańczak (1980); the tendency to retain morphological contrast, Albright (2002a) claims that rather than viewing this as one tendency (among many), determining the way in which analogy proceeds, it is instead the case that it is the basis of paradigm learning (Albright 2008: 151). He states:

“The proposal is that learners adopt a strategy of focusing on the part of the paradigm that contains the most contrastive information, and allows them to project the remaining forms as accurately or as confidently as possible — that is, the most informative or predictive part of the paradigm.” Albright (2008: 151)

Under this approach, analogical change becomes the result of the learning process by which paradigms are constructed in the grammar. This predicts that the base of analogy will be the form from which the rest of the paradigm can most easily be predicted. Returning to the analogy-based analysis found in Fulk (2010), in which Mercian nom/acc.pl.neut. *hēafudu* is analogically reformed to *hēafod*, it is clear that there is a problem, as *hēafod* lacks the overt morphological distinctions that would be informative for a learner of the paradigm. It is not obvious whether this is a problem for the idea that bases for analogy must be maximally informative (Albright 2008) or whether it is an indication that Fulk’s (2010) analysis of this form as being the result of analogy is incorrect. The *hēafod* example, if it is indeed an example of analogy, is not the only example, however, in which analogy proceeds on the basis of an uncontrastive base. Albright (2008: 151) notes that counterexamples exist, including the famous example of Latin rhotacism, in which the contrast between /r/ and /s/ stem-finally is eliminated: [hono:s] ‘honour’ ~ [hono:ris] → [honor] ~ [hono:ris]. Do problematic counterexamples such as these make Albright’s *confidence maximisation* (Albright 2008: 150) merely another analogy tendency? According to Albright, they do not, since many such examples, he argues, are not contradictions, as the base for analogy is the most predictive. This approach requires a particular understanding of the whole way in which morphophonological paradigms are learnt. In this sense, the resulting analogy follows naturally from this learning algorithm, with the result that this account of analogical change provides more linguistic descriptive information than many accounts before. Additionally, one of the most

interesting questions, which is: *Why is a form chosen as the base for analogy?* is addressed by Albright's learning algorithm. The type of base that is selected in analogical change is predicted to be the one within the paradigm from which the rest of the paradigm can be most effectively built. There are two questions of great importance for his analysis that Albright (2008) addresses:

- i. Are there cases of analogy in which the base is *not* the most informative form?
- ii. Why is there a tendency for bases to be the most frequent of least marked forms?

Since it is Albright's aim to describe all analogical change in terms of confidence maximisation, and not to assume that this is only a tendency of the same level of importance as, for example, markedness, cases in which the base of analogy is a less informative form are highly problematic. Albright highlights two such examples, which threaten to undermine his position.

The first of these involves Maori, in which an alternation in the paradigm exists between the passive verbs and unsuffixed forms. A passive form such as *awhitia* 'embrace' is formed by the addition of the suffix *-ia* to the basic form, *awhit*. However, a phonological process deleting word-final stops creates an unpredictable alternation: *awhi* - *awhitia*. Albright draws attention to a problematic case of analogy in which the lack of consonant seen in the unsuffixed form is spread to other parts of the paradigm. Since it is less predictive, this should not be allowed to happen. A second example presented by Albright involves a case from Korean in which analogy is based upon unsuffixed forms, even though the unsuffixed forms undergo coda consonant neutralisation, making them seemingly unpreferable base candidates given the lack of potential predictive power. Albright argues that the unsuffixed and highly neutralised forms are in fact more informative than the suffixed forms (Albright 2008: 169). This is due, he argues, to statistical asymmetries, with unmarked forms being far more common than suffixed forms, resulting in greater predictive power. According to Albright, a form that is most reliable in terms of allowing the learner to predict the rest of the paradigm will only become the base if there are enough tokens. In this case, frequency affects the extent to which a form can maximise confidence in the paradigm.

How does Albright's model fare with some of the Old English examples discussed above? As discussed above, Albright makes assumptions regarding how the base for analogy is selected, and that this follows naturally from a paradigm learning algorithm. A form from which it is most economic to learn the rest of the paradigm is more likely to influence other forms within the paradigm. There is an assumption here that analogy aims to level paradigms. This is of course intuitively correct, and borne out in many cases, however, how can we analyse the cases in which analogy does not create a level paradigm? For example, if we take the example of the past participle, and assume that it is analogical, we run into the problem that within the same paradigm, both overapplication and underapplication are produced by analogy. In this case, what is the base for analogy, and is the aim of paradigm levelling fulfilled? In answer to the second question, the paradigm is actually further divided, with more morphologically redundant alternations being created. This is only a case against Albright's assumptions if one argues that analogy is the true cause. I argue, instead that it is a case of morphologically conditioned phonologisation. A phonological process, in this case high vowel deletion, has become reanalysed as a phonological rule with slightly altered conditions (i.e. \*[DəD]: *do not have [DəD] sequences, PARSE-σ: do not have unfooted syllables*). In this case, it is unproblematic that the rule actually reduces paradigm uniformity.

Having looked at these examples of proposed analogical change within Old English, it is not clear that there is a strong contradiction to Albright's approach, as the analogical element of these changes is questionable. The predictive aspect of analogy bases in Albright's account is useful, and vastly increases the degree to which analogy can be explained, and also its relevance to language development. However, as noted in Albright, more testing is required, and there are certain questions that must be addressed. Firstly, although the account seems able to handle the highly problematic Latin rhotacism, cases in which a base form is analogically replaced on the basis of one of its derivatives are typologically rare. It appears to be the case that this approach predicts that analogy in this direction is just as likely as any other, which is typologically problematic. The idea of *priority of the base* (Benua 1997) will be discussed further in 3.13 and in Chapter 4.



### 3.12. WHERE DOES ANALOGY BELONG?

Analogy, we have seen, is usually assumed to be governed by tendency, rather than law, and also appears to have potentially contradictory tendencies, for example, the need to eliminate irregularity within a paradigm, and also the aim to eliminate redundant information or non-overt morphological information. This idea of universal tendencies that may contradict echoes the constraint battles in Optimality Theory, leading to the question of whether analogy would in fact be best analyzed under an OT framework. Does one language prize, for example the elimination of irregularity over the reduction of redundant information? Are such pressures best formalised as constraints, free to contend with markedness and IO faithfulness?

To allow analogy within the OT grammar would remove the problem of these sometimes unfilled tendencies, as it could simply be assumed that in the language in question, higher pressures from elsewhere (either markedness or IO faithfulness) are preventing analogy (See for example McCarthy's (2005a) *Optimal Paradigms*). It would also allow for analogy to be more common in one language than another, depending on the pressures of the language. There are OT frameworks allowing for this (e.g. McCarthy 2005a, Kenstowicz 1996, Raffelsiefen 2000), so what are the implications of allowing this level of interaction between phonology and morphology?

As we have seen, analogy has traditionally been kept separate from phonological change (for example the Neogrammarian handbooks). I will establish, in Chapter 4, that in this study I will follow a form of Optimality Theory that allows for the interaction of phonology and morphology through strata (see for example Kiparsky 2010). These sub-phonologies allow morphology and phonology to interact in the sense that a morphological domain may have a distinct phonological grammar. However, they do not allow for morphologically specific constraints, or for constraints directly enforcing analogy. Therefore, in Stratal OT, constraints are limited to markedness and IO-Faithfulness. Other frameworks, though, do allow a kind of analogical pressure to form the basis of a third type of constraint: output-output faithfulness (Benua 1997, McCarthy 2005a). Is it necessary, in analysing cases of analogy, to allow for output-output faithfulness, in addition to markedness

and (input-output) faithfulness? The question of whether output-output correspondence constraints are the best way of modelling morphophonological alternations in OT is not limited to the analysing of analogy, and represents one of the central debates within current phonological theory. I will discuss here its implications as far as analogy is concerned, but will also briefly discuss the wider implications of taking on such a framework.

### 3.13. ANALOGY AND THE OO-CORRESPONDENCE DEBATE

I will briefly return to one of the central questions surrounding analogy, which was presented at the beginning of this chapter:

*Directionality*: Why are certain forms liable to be affected by analogy? Which forms are likely to be the model for analogy?

Recall that the following generalisation (Vincent 1974) attempts to answer this question:

a) Basic categories are more likely to be the model for analogy than more marginal ones. Morphological markedness therefore affects the direction of change.

This issue is of particular interest when discussing the parallel symmetric theories of OT, as the predictions entailed by these approaches have implications for the choosing of the base of analogy. One of the predictions of parallel frameworks is that the base to which a candidate must be faithful can be any form within the paradigm, thus, there is no inherent assumption that analogical change will usually fail to alter underived forms on the basis of derived ones. The two central questions to be addressed are:

- 1) Do instances of analogy support this the prediction that any form within the paradigm can be the base i.e. that the base is a surface form? The importance of the answer to this is somewhat dependent on the answer to the second question:
- 2) Should analogy be represented *within* the grammar, in terms of OT

constraints? Beyond these questions, there is also a wider issue. Assuming that analogy is well represented by OO-Correspondence constraints, what is the effect upon other areas of morphophonology? Are the predictions troublesome or beneficial for morphophonological OT as a whole? It will of course not be possible to investigate this last question in much depth here, though I take into account this issue when committing to the theoretical perspective found in the analyses in Chapters 6–8.

As regards question (1), paradigm levelling (e.g. Raffelsiefen 2000) constraints appear to make no such prediction, since any form within the paradigm might be proposed as the ‘base’ of analogy. It is, though, noteworthy that the selection of more simple morphological forms as analogical bases has only been shown to be a tendency, so it is perhaps questionable to what extent this is problematic for paradigm levelling constraints. However, it is shown to be a greater problem when taking into account question (2). The problem is, that when analogy is analysed using a third type of constraint, synchronically within the grammar, it opens up the possibility that the phonology of underived stems can be influenced by derived and inflected ones. This of course is contrary to the predictions made by LPM and Stratal OT, in which the base is a non-surfacing underived form, rather than an output form selected from the paradigm. Although analogical change can in many cases be accounted for successfully, we lose many of the predictions made by level ordering, which, I will argue, is too great a cost. Before that conclusion can be made, of course, I will consider the framework in light of a much discussed process, that has been argued to be best accounted for using OO-correspondence constraints.

Accounts such as Raffelsiefen (2000) and Kenstowicz (1996) rely upon the assumption that an OT grammar is symmetric, in that no forms or processes are prioritised within the grammar. Thus, these approaches do not predict priority of the base. Before discussing the notion of the base, it is necessary to define exactly what is meant by the term. In serial theories, such as LPM and Stratal OT, the base is an abstract underlying representation that does not surface. Within a paradigm, the form that most closely represents the base will be the one that is unaffected by further morphological processes, i.e. the underived basic form. Therefore, if we recall the

laws of Kuryłowicz (1949), it has been noted that analogy tends to preserve priority of the base. The priority of the base, which is naturally preserved in serial approaches is relevant not only in analogy, in which it might be a tendency, but is claimed to be a necessary element of phonological theory (see for example Bermúdez-Otero forthcoming, Benua 1997, Collie 2007 etc.). Analogy in fact represents many of the cited examples in which base priority is claimed to be contradicted. Of course, the question of whether analogy should be represented within the grammar is of great importance in ascertaining whether these examples constitute cases of base priority violations. Also, we must question why analogy, which is often claimed to prove incorrect the assumption that underived forms should not undergo the overapplication or underapplication of phonological processes on the basis of derived forms, has long also been assumed to preserve base priority in most instances.

Since cases that support the prediction that there should be no base priority are relatively rare, I will not adopt such an account here. To prevent this prediction in such analyses involves high amounts of stipulation, which can be seen in Benua's (1997) Transderivational Correspondence Theory, which is asymmetric, but employs constraint hierarchy recurrence in order to enforce this asymmetry. This problem will be revisited in Chapter 4, in which I will discuss German schwa alternations.

### 3.14. CONCLUSION: THE APPROACH THAT WILL BE ADOPTED IN THIS STUDY

The preceding sections have shown that although the traditional Neogrammarian handbooks have clear ideas about what may constitute a phonological process, they do not apply such rigid constraints to analogy. The Old English examples given above show that many of the constraints upon analogy that have been debated within the field (e.g. Vincent 1974, Mańczak 1980 etc.) are not fulfilled if we are to accept that the processes discussed in (3.1) and (3.2) are analogical. If the definition of analogical change remains too loose, there is a risk that the explanatory advantage of the term is reduced to something almost as general as 'exception to sound change', as was often the case for the Neogrammarians.

On the other hand, Albright's (2010) model emphasises the necessity for a form upon which analogy is based to be predictive, and also for the most predictive

forms to be great enough in number. However, many aspects of analogy remain unaccounted for, including the question of why bases tend to be underived, which appears to follow simply by chance in Albright's learning algorithm. It also remains unclear why and how analogy takes place, once the base has been selected.

In the analyses and discussions in chapters 6–8, I will use the term 'analogy' to refer to cases of morphological levelling and extension, but reject the use of the term to refer to cases of morphologisation that appear to contradict some of the defining aspects of analogy, for example the past participle phenomenon discussed above. I will also reject the use of approaches in which analogical pressures are allowed to interact as constraints, since this entails a prediction that any form can affect any other form within a paradigm (See Bermúdez-Otero 2005, Collie 2007 for discussion). Such a framework loses the benefits of inherent asymmetry through serialism, to the extent that serialism has to be stipulated in some versions of symmetric monostratal OT (e.g. TCT Benua 1997).

## CHAPTER 4

### A problem for morphophonological modelling

#### 4.1. INTRODUCTION

The behaviour of some of the Old English data has thrown up an interesting problem that has important theoretical implications for phonology in general. This will be the focus of the current section. Although I will return to the data, providing a full analysis in sections 6–8 of the thesis, I will look briefly at the problem in terms of its morphophonological implications in this section. This morphophonological problem is that phonological processes may behave distinctly according to the morphological categories of the words which they affect. Morphophonological effects such as this leave phonologists with the task of accounting for a grammar in which the successful application of a phonological rule, or the manner of application is determined by non-phonological information. Old English is not alone in exhibiting such affects. In the following sections I will also examine some cases of similar morphophonological effects in other languages and the phonological descriptions that linguists have used in relation to them. I will also consider generally the varying treatments which can describe such phenomena.

This theoretical problem has a long history in linguistics. The philological texts which provide us with detailed information about Old English, such as Campbell's (1959) *Old English Grammar*, come from a Neogrammarian perspective, assuming that phonological change is regular, and assuming exceptions to the rules to be the result of morphologically motivated analogical change. Traditional generative grammar, as found in Chomsky & Halle's (1968) *Sound Pattern of English* is in stark contrast to this, presenting phonological rules that are able to refer directly and freely to morphological and lexical elements. The Neogrammarian model is unable to account for the intricacies of phonology and phonological change. On the other hand, the SPE model has been criticised for being over-powerful. A framework that makes no distinction between a fully productive rule and a highly morphologised one may also sacrifice the ability to fully account for rule demise. As

discussed in the previous chapter, LPM (Kiparsky 1982) has made many interesting developments regarding this problem. By assuming the grammar to be stratified, truly phonological rules are able to be restricted to certain types of morphology (depending on the number of levels in a given LPM framework) or to act totally independently of morphology at the postlexical level. Optimality Theory has numerous ways of dealing with morphophonological effects, including the Output-Output (OO-) Correspondence Theoretic (e.g. Benua 1997) accounts, which posit a series of OO-Correspondence constraints requiring items within a paradigm to follow a particular existing output. Related to this is paradigm levelling, in which constraints can force inflectional paradigms to maintain their identity. Stratal Optimality Theory (Kiparsky 2009, Bermúdez-Otero forthcoming etc.) incorporates some of the insights gained in LPM with OT. In this framework, it is assumed that the grammar is stratified, with each stratum selecting differing constraint rankings. Interface constraints (McCarthy & Prince 1995) allow OT constraints to refer directly to morphological information. In contrast cophonological analyses allow no morphologically indexed constraints, but allow morphological categories to select differing sub-rankings when the master hierarchy leaves certain constraints unranked. Cophonologies are not limited only to strata, and it is assumed in the later analyses, that within strata morphological categories may select different sub grammars. These differing, and often conflicting positions within OT have two major divisions. Firstly, some theoretical positions allow constraints that have some level of concern with morphological information. On the other hand, other theoretical positions within OT maintain that constraints themselves are concerned only with phonological information, but allow *rankings* to target morphological categories by other means. Secondly, there are the frameworks that allow only Input-Output correspondence relationships (for example Stratal OT, Bermúdez-Otero forthcoming), and those that allow correspondence between outputs (i.e. OO-Correspondence Theory, including paradigm levelling).

Section 4.2 discusses the life cycle of phonological processes, and the connections that have been drawn in the literature about morphological conditioning and its implications for language change in general.

Section 4.3 builds on the discussion started in Section 4.2, using an example from Finnish. Anttila (2002a) discusses the ways in which phonological and morphological conditioning interact in complex ways with respect to the choice between mutation and deletion in certain environments.

The example from West Saxon adjectives in Section 4.4, similarly to the Finnish example, shows that morphological category can determine not only whether a phonological process is active as in the Lindisfarne example, but also the precise way in which a phonological ‘problem’ is repaired. In this case, an unfooted syllable is repaired by apocope in feminine adjectives, and syncope in neuter ones.

In section 4.5 I examine an interesting example from German, which has many similarities to some of the Old English data. The process of schwa epenthesis, which is highly sensitive to sonority also displays morphological conditioning. I will discuss various (morpho)phonological accounts which have been used in describing the German data. In this section I will also consider benefits and otherwise of monostratal parallel OT accounts.

Section 4.6 considers in more detail the debate between cophonology and interface constraints supporters. I discuss a recent study that claims to shine some light on this issue.

Section 4.7 examines the wider problem of why morphophonology evolves in the ways outlined in Sections 4.2–4.6. The debates between different morphophonological models will be considered in an effort to lay the theoretical foundations for the rest of the thesis.

Section 4.8 moves away from morphological issues, and addresses a different issue that is thrown up by the data: how to model variation.

## 4.2. THE LIFE CYCLE OF PHONOLOGICAL PROCESSES

### 4.2.1. *Introduction*

The forthcoming sections of this chapter will discuss some of the different ways in which we can account for the interaction of phonology and morphology, and how we can account for variable phonological processes. However, in assessing the merits of

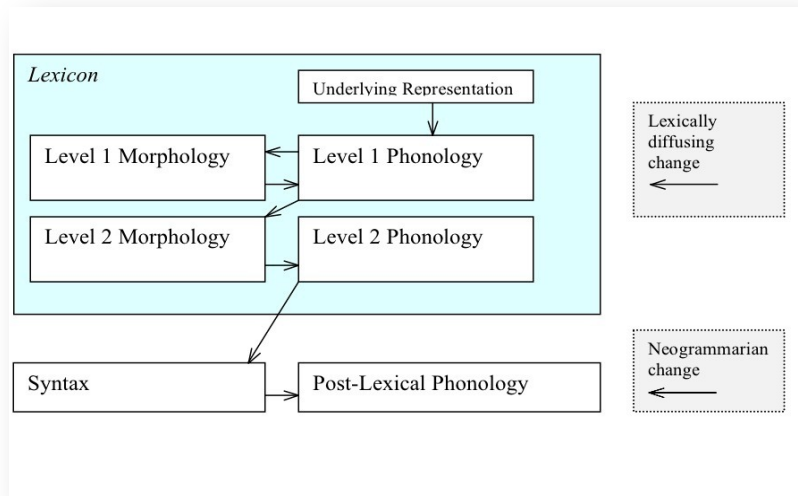


particular phonological frameworks, it is crucial to ask to the central question of why the phonology evolves in this way, which brings us to the *life cycle of phonological processes* (Kiparsky 2003, Bermúdez-Otero 2005). This section will discuss some examples of phonological change, and their implications for our understanding of language change.

Many frameworks have claimed to tell us something about the life cycle of phonology, and for the motivation for change. As alluded to throughout the first part of this thesis, it was assumed by the Neogrammarians that sound change should be regular and phonetically motivated. From this follows the assumption that all lexemes are to be affected at once, thus, phonological change is not expected to be morphology sensitive. Exceptions to this are put down to analogy, though we have discussed in the last chapter the risk of losing some of the explanatory power of analogy if it is used to describe all exceptions in an unconstrained manner. Despite these common criticisms, the Neogrammarians were successful in describing certain types of change, and their assumption that physical motivations relating to speech production and perception are of course useful with respect to changes such as assimilation.

A contrasting framework, in which Neogrammarian sound change is argued, at least in many cases, to be incorrect, is Lexical Diffusion. Lexical Diffusionists (e.g. Wang 1969), backed up by their evidence drawn from change in progress, claimed that sound change was not regular, and spread throughout the lexicon, affecting forms on a lexeme-by-lexeme basis. As such, change was assumed to be morphologically sensitive. One framework that has been claimed to incorporate both types of change, or at least be able to account for them, is LPM (Kiparsky 1982). This framework, which is the precursor to the stratal OT framework pursued in the present thesis, assumes that the phonology is divided broadly into two domains: the lexicon and the postlexical level. Within the lexicon, two or more levels allowing for the interaction of phonology and morphology may be posited.

#### (4.1) Basic LPM Model



The LPM model can account for phonological processes such as aspiration in PDE, in which initial voiceless plosives are aspirated. This process has the hallmarks of Neogrammarian sound laws, in that the phoneme is affected, not the lexeme, and thus, every word class is affected. Additionally, phonological processes subject to morphological restriction are accounted for through the interaction of phonology and morphology in the lexicon. Interestingly, it has also been claimed that processes might begin their phonologised life at the postlexical level, and then may percolate deeper into the lexicon, with Level 1 representing their least robust stage, before which they might become totally lexicalised, at which stage their results are stored lexically, and they cannot be claimed to have any activity as a rule (Kiparsky 2003, Zec 1993). This brings us closer to the discussion about the life cycle of phonological processes, for it is not merely a question of whether phonological processes can interact with morphology, or even how to account for such interactions, but also why morphophonological interactions occur in the first place.

#### 4.2.2. *Ash tensing*

A much discussed phenomenon in present-day English, that demonstrates the way in which phonological processes might climb the levels, and exhibit morphological conditioning while doing so is *æ* tensing. Short unstressed *æ* has undergone unconditional tensing in some varieties, for example in the west of Scotland, and in northern US cities such as Detroit (Labov et al 1972). In other areas, the change is contextually determined. Within the generative rule-based tradition, the following rule has been proposed to describe *æ* tensing as a phonological process (Harris 1989: 43):

(4.2)

##### *æ-Tensing*

$$\left[ \begin{array}{l} + \text{low} \\ - \text{back} \end{array} \right] \rightarrow [+ \text{tense}] \quad / \quad \begin{array}{c} \sigma_s \\ \swarrow \quad \searrow \\ \times \quad \times \\ | \quad | \\ - \quad [F] \end{array}$$

The rule states that tensing occurs when *æ* is in a stressed syllable that is closed by certain consonants (represented by [F] in the rule (Harris 1989: 43)). Interestingly, different varieties have subtly different environments:

Philadelphia: [F] = anterior nasals, anterior voiceless fricatives

New York: [F] = anterior nasals, anterior voiceless fricatives and voiced stops

Belfast: [F] = all of the above + voiced fricatives

It has been argued that the anterior nasals have lead the change, but as can be seen when we look at, for example, Belfast, some varieties have extended the environment to include other consonants. In Philadelphia, New York and Belfast the lax variety will occur the following examples (examples from Harris 1989):

(4.3)

(a) tap, bat, match, back...

(b) panel, ladder, wagon...

The tense variety will occur in the examples in (c):

(c) pass, path, laugh, man...

This is a change that, at least in Detroit, might have the hallmarks of a Neogrammarian change, i.e. exceptionless change affecting all lexemes. This of course cannot be said for the change in Philadelphia and New York. In addition to the examples in (a), (b) and (c), in which the alternations are phonologically predictable, we also see morphologically conditioned exceptions:

(d) Lax: manner, wagon, dagger

(e) Tense: manning, wagging, dragger

The examples in (d) and (e) show apparent overapplication of *æ* tensing in forms in which the relevant consonant does not close the syllable. These are forms with word-internal morpheme boundaries. Additionally, Level 2 boundaries show tensing, but Level 1 boundaries have variation in Philadelphia. Thus, it can be concluded, within a LPM framework, that the rule is situated within the lexicon for Belfast, Philadelphia and New York, while being postlexical, (Neogrammarian) in western Scotland and northern US cities (with tensing across the board and no sensitivity to morphology). Harris (1989) argues that these represent different stages within the life cycle of the process.

As a rule loses robustness, it climbs through the lexical levels, exhibiting sensitivity to morphological information (Kiparsky 2003, Zec 1993, Harris 1989). As a rule becomes less robust phonologically, it becomes less learnable, and hence, other conditions are likely to emerge. I will now move onto an example from Finnish

that has been argued (Anttila 2002a) to provide evidence for the *emergence of morphology* as a consequence of phonological weakness.

#### 4.2.3. Finnish vowel alternations

Anttila (2002a) describes an example that is of great interest in terms of modeling the life-cycle of phonological processes, in which a phonological process comes to affect adjectives and nouns differently. This has important implications for phonological theory, as it is necessary to allow morphological category to be the deciding factor in an aspect of how a phonological process applies. A repair process in Finnish affecting stem-final low vowels before suffixal /i/ causes the low vowel either to mutate to a mid vowel or delete. Anttila (2002a: 4) provides some examples in which these alternations are purely phonologically conditioned:

(4.4)

(a)

$a \rightarrow o / \{i, a, e\} . \_\_ -i- \{pl, past\}$

/kana-i-ssa/      kano-i-ssa      ‘hen-PL-INE’

(b)

$a \rightarrow \emptyset / \{u, o\} . \_\_ -i- \{pl, past\}$

/muna-i-ssa/      mun-i-ssa      ‘egg-PL-INE’

The phonological conditioning causes the low vowel to mutate to *o* if the nucleus of the preceding syllable is unrounded, and to delete if it is rounded. The low vowel deletes if the nucleus of the preceding syllable is rounded. This is a regular and productive process, but it applies only in nonderived stems with an even number of syllables, showing that it is morphologically sensitive and that it counts syllables (Anttila 2002a: 5). Anttila (2002a: 5) provides some examples showing failure of the rules in (4.4) a–b:

(4.5)

/tavara-i-ssa/	tavaro-i-ssa	‘thing-PL-INE’ (mutation)
/jumala-i-ssa/	jumal-i-ssa	‘God-PL-INE’ (deletion)
/itara-i-ssa/	itaroi-ssa / itar-i-ssa	‘stingy-PL-INE’ (variation)

The above forms do not fulfil the phonological conditions set out in (4.4), as the nucleus of the preceding syllable is the same; /a/ in each of the examples. They would therefore be expected to undergo mutation. Anttila finds that the precise vowel that appears in the penultimate position affects the outcome. However, this effect is not total, as mutation and deletion can both follow any vowel. Anttila (2002a: 7) provides the following vowel hierarchy which shows the effect of vowels on the preference of mutation or deletion:

(4.6)

mutation /i/ > /a/ /e/ /u/ > /o/ deletion

In trisyllabic stems, Anttila finds a further phonological condition: that the phonological qualities of the stem consonant are associated with higher rates of deletion or mutation. Stems with a labial consonant favour deletion while stems with a dorsal consonant favour mutation (Anttila 2002a: 9). Anttila provides the following hierarchy, which shows the order in which consonants fall in relation to deletion/mutation preference:

(4.7)

Mutation	Deletion	
/k,g/ > /t,d,s,n,r,l,j/	/m,p,b,v,f/	(Anttila 2002a: 9)

In addition to the phonological conditioning, Anttila (2002a: 13) also finds morphological conditions. The complex phonological conditions show that this phonological process is alive and active. It is therefore clear that the morphological

conditioning must be accounted for in a way that does not totally require the separation of morphology and phonology, as both are active in this example.

To illustrate the morphological conditioning, Anttila (2002a: 13) points out that forms such as /tavana/ *tavaro-i-ssa* ‘thing’ (mutation) and /jumala/ *jumal-i-ssa* ‘God’ (deletion) are problematic in that they both have a coronal consonant and a penultimate /a/, therefore providing the same phonological environment. Anttila (2002a: 13) also discusses a set of examples that are particularly interesting, as they can be formed as adjectives or nouns, and the stems for each category are homophonous:

(4.8)

/kihara/ ‘curl’ n. kiharo-i-ssa (M)

/kihara/ ‘curly’ a. kihar-i-ssa (D)

/korea/ ‘Korea’ n. Koreo-i-ssa (M)

/korea/ ‘beautiful’ a. kore-i-ssa (D)

Clearly, there is no phonological way in which we could predict an alternation between these forms. The only aspect dividing them is the word class. Therefore, the answer to this problem is that a morphological condition has been added, with adjectives favouring deletion and nouns favouring mutation (Karlsson 1978, Anttila 2002a). The framework that Anttila (2002a) adopts for dealing with this complex issue is a cophonological one which assumes that ranking relations are *partially ordered* (Anttila 2002a: 21). Unlike a total order, in which every constraint is ranked in relation to every other constraint, in the instance of partial ordering the ranking may be incomplete.

Anttila’s discussion of this phenomenon provides useful insights into the way in which morphophonological change progresses. It is argued that the morphological conditions reveal themselves when the phonological conditions are at their weakest i.e. *the emergence of morphology* (Anttila 2002a: 14). The learner therefore, faced with an opaque phonological process, finds that learning the pattern of outputs with respect to morphological categories is more straightforward. When a phonological process is highly robust and learnable, there is no need for learners to add

morphological conditions. The fact that additional phonological and morphological conditions come into play is symptomatic of the high levels of opacity that affect the paradigm, thus weakening the original phonological conditions. In the case of Finnish, it is the fact that the phonological condition is only enforced in forms with an even number of syllables that causes the weakness of the process in the trisyllabic forms. Because the process does not apply regularly in trisyllabic stems, more fine tuned levels of phonological conditioning stem in, and also morphological conditioning. It is clear that to deal with phonology and inflectional paradigms, a sophisticated model for describing the interactions is required. Partially Ordered Constraints have the benefit of making relatively minor changes to the OT model, compared, for example to morphologically specific constraints. These will be described in more detail in the following section, where the question of whether it is necessary to allow constraints to be allowed to apply specifically to morphological categories will be addressed. A process found in the adjectives of West Saxon (Scott 2005) throws up some of the same issues. I will now briefly describe the problem, and possible treatments.

#### 4.2.4. *Feminine vs. neuter in West Saxon adjectives*

The final example I will discuss in this section focussing on the life cycle of phonological processes comes from Old English adjectives (Scott 2005). I will, in the next section move onto an example from Modern German, in which I will discuss how best to account for an example of a morphologically conditioned phonological process.

As explained above, HVD can be assumed to be a process which removes unfooted light syllables. The crucial constraints involved in syncope are given above in 2a and b. Therefore, a heavy stemmed disyllabic form such as *hālig* ‘holy’, *hēafod* ‘head’ etc. will undergo syncope when a vowel initial suffix is added dative *hēafdum*, *hālgum* etc. A problem that is well documented in the literature (Hogg 2000, Bermúdez-Otero 2005 etc.) is that when the suffix is a closed syllable with a high vowel, as in the nom.acc.pl.neut. and nom.sg.fem. of nouns and adjectives, we are left with two unfooted light syllables. This problem can be solved by either



apocope or syncope: *hēafdu*, *hēafod*. In the adjectives and nouns, though not the verbs, deletion will never result in a VVCC cluster (Hogg 2000), meaning that syncope *and* apocope never apply together. Data from the West Saxon adjectives (Scott 2005) exhibit a problem in relation to the choosing of either syncope or apocope as a repair process for unfooted light syllables, in satisfaction of PARSE-σ. I will briefly recount the main details of this phenomenon, before discussing some of the merits of the cophonology analysis.

#### (4.9) Relevant data from West Saxon adjectives

(a)

##### **Nom.sg.fem.**

Alfred: *hālig* x8 (apocope)

*hālgū* x3 (syncope)

Bald: *hālig* x7

*hālgū* x1

Ælfric : *hālig* 100%

(b)

##### **Nom/acc.pl.neut.**

Alfred: *hālgā* x3

*hālgū* x10

Bald: *hālgū* x2

Ælfric: *hālgē* x3

*hālig* x2

Data reproduced from Scott (2005)

As the data show, there is a strong tendency for neuter adjectives to show syncope. The feminine *ō-stem* adjectives, on the other hand, consistently favour apocope over syncope. This departure of the feminine adjectives from the neuter represents a change in progress, with the *hālig* form showing greater prevalence in the Late West Saxon text of Ælfric than in Early West Saxon. Though, even in EWS, *hālig* is preferred in the nom.sg.fem. to *hālgū*. Once again, we have an example where a

phonological process had become split along the lines of morphological category, in this case, the gender.

The phonological conditions, in terms of OT, are the result of the constraints in (2.22) together with the STRESSWELL, which determines the site of deletion, causing syncope to proceed as opposed to apocope if ranked above PARSE- $\check{\sigma}$ :

Therefore, in the feminine *ō-stem* adjectives, the following constraint ranking is in place:

(4.10)

MAX-V2  $\gg$  PARSE- $\check{\sigma}$   $\gg$  STRESSWELL  $\gg$  MAX-V  $\gg$  PARSE- $\sigma$ .

This raises once again the issue of cophonologies. From a phonological perspective, the problem is that syncope and apocope cannot simply be phonologically conditioned phenomena, given that two contrasting outcomes depend on the morphological features of the item. This is despite the facts that the vowels are in identical prosodic conditions, and of the same historical origin, within lexical items of the same shape and within one dialect. Therefore, it is clear that we have a morphologically conditioned phonological alternation. The question is how to deal with such forms. The phonological process involved was once robust, but at this stage of the grammar, is becoming morphologised. This is seen to an even greater extent in relation to apocope in the nom/acc.pl.neut. and nom.sg.fem. below.

Within Optimality Theory, as raised in the preceding section, there are two competing ways to deal with such phenomena: morphologically specific phonological constraints and cophonologies (Anttila 2002a: 1). How will each of these models fare with the Old English example? A cophonology analysis includes a master hierarchy (Bermúdez-Otero & McMahon 2006: §4) containing all the constraint rankings that are in effect across the board in the language. However, the master hierarchy may leave the relative ranking of some constraints unspecified. In this situation, different morphological constructions may select different total orderings compatible with the master hierarchy. In the Old English adjective case, the master hierarchy is MAX-V<sup>2</sup>  $\gg$  PARSE- $\check{\sigma}$ , STRESSWELL  $\gg$  MAX-V  $\gg$  PARSE- $\sigma$ , with

the relative ranking of *PARSE-Ń* and *STRESSWELL* unspecified. This is compatible with two total orderings: *nom.sg.fem. adjectives* select *MAX-V<sup>2</sup>* » *PARSE-Ń* » *STRESSWELL* » *MAX-V* » *PARSE-σ*, yielding the output *hālig*. The *nom/acc.pl.neut. adjectives*, in contrast, select *MAX-V<sup>2</sup>* » *STRESSWELL* » *PARSE-Ń* » *MAX-V* » *PARSE-σ*, giving the output *hāligu*.

The alternative approach, interface constraints (McCarthy & Prince 1995) could be used to analyse this problem in the following way, with just one constraint ranking for all morphological categories:

(4.11)

*MAX-V<sup>2</sup>* » *PARSE-Ń fem* » *STRESSWELL*, *PARSE-Ń* » *MAX-V*

(a) Feminine input *hāligu*

ha:liju	<i>MAX-V<sup>2</sup></i>	<i>PARSE-Ń fem</i>	<i>STRESSWELL</i>	<i>PARSE-Ń</i>	<i>MAX-V</i>
[ <sub>o</sub> [.ha:..].lij.] ➡			*		*
[ <sub>o</sub> [.ha:l.].ju.]		*!		*	*

(b) Neuter input *hāligu*

ha:liju	<i>MAX-V<sup>2</sup></i>	<i>PARSE-Ń fem</i>	<i>STRESSWELL</i>	<i>PARSE-Ń</i>	<i>MAX-V</i>
[ <sub>o</sub> [.ha:..].lij.]			*!		*
[ <sub>o</sub> [.ha:l.].ju.] ➡				*	*

Tableaux from Scott (2005)

The tableaux in (4.11) show that morphologically specific constraints can indeed be used to describe the West Saxon adjectival alternation. However, there are important conceptual differences between the two methods. Analysis (4.11) involves the use of highly stipulative constraints that are unlikely to be demonstrable in other language

systems. For example, they lead to the question of whether there is a universal tendency for feminine grammatical cases to favour apocope. Additionally, it would seem to be the case that any morphological category could have its own constraints, and even potentially lexemes. The main problem would be that it would be very difficult to demonstrate that there is any universality in these morphologically indexed constraints. Anttila (2002a: 5) points out many of the shortcomings of such analyses, including the fact that they are unable to account for synchronic cases of lexical diffusion. Looking specifically at the OE evidence, the interface constraint analysis implies that the ranking  $\text{MAX-V}^2 \gg \text{STRESSWELL} \gg \text{PARSE-}\check{\text{O}} \gg \text{MAX-V} \gg \text{PARSE-}\sigma$  is in place in the language, but with the need for the stipulation of a feminine specific constraint. The master hierarchy in the cophonology analysis can be thought of as consisting of robustly cued, easily acquirable rankings; constraint rankings not included in the master hierarchy, in contrast, are more delicate and susceptible to emergence-of-morphology effects. Additionally, as we will see below in Section 4.9 there is evidence (Albright 2008) that suggests that cophonological analyses better reflect the ways in which grammar becomes morphologically divided, in that the tendency to split grammars is a ‘global’ decision, affecting the language in general, rather than being posited in light of a particular alternation.

#### 4.2.5. *Section summary*

The example of *æ* tensing demonstrates two points of interest. Firstly, that by studying more than one variety of a language, the different paths taken by a phonological process can be revealed. In the case of *æ* tensing, we have seen that what may be a postlexical robust process in one text can be a morphologised Level 1 process in another. This shines light on the life cycle of phonological processes, and it is my intention, through examining EWS and *Li*, to see whether the different varieties also show the progression of a sound change from robust to morphologised in different ways. Secondly, it demonstrates that when a phonological process becomes less predictable from the phonology alone, it may percolate deeper into the grammar. The Finnish example builds on this latter point, in that it is argued by Anttila (2002a) that when phonology is unable on its own to cause a particular

outcome, we should predict that the grammar could become drawn along a morphological line. The example from OE, as well as from Finnish, demonstrates that a model of phonology that allows for different grammars for different morphological categories is necessary. In this thesis, I adopt Stratal OT (SOT) framework, which allows for different constraint rankings to be selected for different morphological domains. Unlike LPM, SOT has the benefit of representing change in terms of universal constraints. For example, in the case of *æ* tensing, the rule outlined in (4.2) does not tell us anything about the nature of the process, therefore lacking explanatory power. Since rules are language specific, there is nothing in principle to prevent the positing of highly unnatural rules that are not backed up by typological evidence. Furthermore, even in cases in which such a rule might be of use, there is nothing to distinguish natural from unnatural rules. In OT, on the other hand, all constraints are assumed to be universal, which restricts the motivation for phonological processes to those which are widely attested.

#### 4.3. CASE STUDY: GERMAN SCHWA ALTERNATIONS

A phenomenon in Modern German bears a striking similarity to certain Old English examples. The process is sensitive to phonology, and also to morphology. Schwa appears in a number of word-final consonant clusters ending in an obstruent and a sonorant, as in the following examples (taken from Wiese 1996: 243):

(4.12)

*Segel* ‘sail’

*Filter* ‘filter’

*Segen* ‘blessing’

*Atem* ‘breath N’

*dunkel* ‘dark’

The <e> here in German variably represents a syllabic consonant or a schwa + sonorant sequence (Giegerich 1999). It is forms such as the above, in which there is a stem-final obstruent+sonorant cluster which will be the focus of this discussion. It is

(4.13)

**filtrat** ‘filtrate’

atmung ‘respiration’

(4.14)

b.  $X \rightarrow V$

1

103

Rule (4.14) can account for the examples above; however, alternative accounts exist. For example, it is possible to assume that the alternations rise from the principles of syllabification, rendering a specific schwa epenthesis rule unnecessary (Ito 1989, Noske 1993). Wiese (1996: 245) argues that this framework would not necessarily be favourable, as the effects of this rule occur only morpheme finally; a condition which does not follow from syllabification. This would require syllabification to be allowed to take into account subtle morphological information. The question of the extent to which phonological theory can take into account morphological information is central to this discussion, and will become more apparent when we discuss the ways in which the rule above is contradicted by other German evidence.

In the examples so far, the behaviour of schwa is predictable and uncomplicated, however, the situation is far more complex than this and there are many examples that cannot be accounted for using the above rule. In cases where epenthesis is not phonotactically required, there are other phonological or morphological factors at play. Consider the following examples (Giegerich 1987)

(4.15) Verb stems:

	/N/	/l/	/r/
Infinitive -(e)n	atm+en	besiedel+n	
erweiter+n			
	ordn+en	segel+n	erheiter+n
Noun-forming -ung	Atm+ung	Verdunkel+ung	
Erweiter+ung			

The verb stems exhibit epenthesis in /l/ and /r/ forms but not in nasal forms. This is in line with the sonority sequencing principle.

(4.16) Noun stems:

	/N/	/l/	/r/
Standard German	kurzatm+ig	adl+ig	adr+ig
Colloquial German	kurzatm+ig	adel+ig	ader+ig

Standard German noun stems, in contrast to the other word classes, reject epenthesis in each of the target environments.

(4.17) Adjective stems

	/N/	/l/	/r/
Comparative <i>-er</i>	trocken+er	edl+er	heiter+er heitrer
Plural <i>-en</i>	die trocken+en	die edl+em	die heiter+en heitr+en

Adjective stems show epenthesis in nasals, with non-epenthesis in /l/ environments and variation in the instance of /r/.

The examples above show two things. Firstly, that sonority plays an important role in some morphological categories. The verbs display a strong connection between schwa and sonority, with the least sonorous stem final consonants, nasals, lacking epenthesis. In contrast, the adjective stems appear not to be sensitive to sonority. This brings us to our second point; that morphological category plays a role. In verb stems, affixed forms have epenthesis in /l/ and /r/ stems. Nasal forms reject epenthesis. Noun stems in colloquial German pattern like the verb stems. In Standard German, however, noun stems reject epenthesis in all environments. Adjective stems, interestingly, show epenthesis in nasal environments and in /r/ stems, with non-epenthesis in /l/ forms.



A successful account of the data above must allow the interaction of phonology and morphology. By examining the examples above, we can see that the German data shares certain similarities to some of the issues discussed in Old English, including the issue of phonological processes becoming morphologically sensitive. I will firstly discuss some phonological analyses that have been posited, and will then move onto the question of how morphological influence of this kind can be modeled. Wiese (1996: 248) suggests that schwa epenthesis and sonorant syllabification, which are both in evidence variably here must operate strictly cyclically. In a form such as *bäurisch*, syllabification and epenthesis must not be allowed to proceed before the morphological addition of *-isch*. If this were to happen, the resulting form would be *\*bäuerisch*. The unaffixed form, however, must be allowed to gain the schwa: *Bauer*. Assuming that Strict Cyclicity is in place, and that schwa epenthesis in *Bauer* is the same process affecting *bäurisch* it is therefore necessary to have a stem category, meaning that a root entry will undergo morphological changes to become a stem. The form will therefore not be underived, and can be affected by schwa epenthesis unproblematically. It is clear that the data cannot be fully understood without considering the morphological conditioning that is present within the system.

#### 4.3.1. *How to incorporate morphology into this account*

##### 4.3.1.1. *Stratal model*

In Wiese's (1996) lexical phonology account it is recognised that this process is sensitive to morphological category. For lexical phonology, this is not particularly problematic, as the interaction of phonology and morphology in the lexicon is allowed by the fact that phonology at a given level follows the morphology, and also by the provision of postlexical phonological rules.

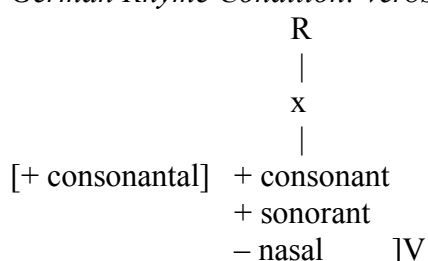
Another account within the LPM framework is presented in Giegerich (1999). Using stratal distinctions, it is possible to account for the varied ways in which epenthesis and sonorant syllabification behaves. I will provide some background to this account: It is claimed that three strata in German exist: the root

level, the stem level and the word level (as opposed to two, the root level and the word level in Present Day English). Roots are not assigned to a lexical category, while words are. The intermediate level, that of the stem, involves bases that are specified for lexical categories, but are subject to further affixation (Giegerich 1999: 88). The reason for the two-level system in English, according to Giegerich (1999: 88), is that English has lost its stem level. This is connected to the loss of the detailed inflectional systems in English, which has not happened in German. This is one way in which Modern German and Old English are connected, in contrast to Present-Day English.<sup>15</sup> However, the analyses in Chapters 7–8 of the Old English weak verbs and past participles require the use of a stem level, but not necessarily a root level. This leaves the question of whether Old English, although it had distinct roots, stems and affixes, ever required a domain for interaction between phonology and morphology at the root level.

Giegerich (1999: 266) claims that the syllabification situation in verbs would require the relevant forces behind it to operate at the stem level. Evidence for this comes from the fact that it is sensitive to morphological processes, which are stem-based and located at Level 2 (Giegerich 1999: 266). Also, this process occurs in the instance of fully productive suffixes such as *-ung*, which are morphologically classifiable as Level 2. Giegerich (1999: 267) provides the following rhyme condition:

(4.20)

*German Rhyme Condition: verbs* (Level 2)



Modified from (Giegerich 1999: 267)

---

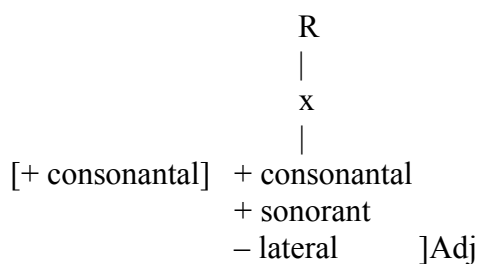
<sup>15</sup> Note however that although OE forms have distinct roots, stems and inflexional endings, only two strata are claimed to be necessary (in the present study and also in Bermúdez-Otero 2005).

This would account for the situation in the verbs, where liquids become syllabic and nasals do not.

As shown above, adjectives do not follow the phonologically expected pattern of the verbs. Due to morphological conditioning, we have a situation where the least sonorous stems, ending with a nasal, show epenthesis. Giegerich notes that there is a morphological distinction in terms of levels, between the adjectival inflexion and verbal inflexion. This is that verb inflection in German is stem based (Level 2) and that adjectival inflection is generally word based (which in German corresponds to Level 3). It does not automatically follow from this that adjectival inflexion is situated at Level 3, as words contain stems, meaning that it is also possible that it is situated at Level 2 (Giegerich 1999: 268).

(4.21)

*German Rhyme Condition: adjectives* (Level 2)



Modified from (Giegerich 1999: 268)

Given that we have the same phonological environment in *dunklen* (adj.) and *dunkeln* (verb), it follows that there must be a morphological distinction that is forcing adjectives away from the phonologically natural, sonority influenced process which is seen in the verbs. Noun stems, on the other hand, (at least in Standard German) show no epenthesis in affixed forms. This, Giegerich (1999: 268) argues, is because root-final clusters are syllabified on Level 1. This is shown by the fact that the only alternations present in nouns are in the instance of Level 1 derivational morphology: *Zylinder* ~ *zylindrisch*. The nouns in Standard German, therefore behave the same as Present Day English Level 1 examples such as *baptism* - *baptismal* etc.

#### 4.3.1.2 Parallel OT frameworks

In this section I will consider the validity of OO-correspondence frameworks in analysing morphophonological phenomena such as the above. Although any serious comparison of these two frameworks is impossible in this space, I will also briefly attempt to discuss more generally whether the insights gained from parallel theories are beneficial, or whether there are problems arising from the loss of certain stratal insights, such as the priority of the base. I will begin by considering an account in which the German phenomenon above is described using a paradigm levelling analysis.

Monostratal parallel frameworks allow constraints that clash with phonological markedness constraints on the basis of some kind of output-output uniformity. Paradigm levelling (used in Albright 2005, McCarthy 2005a etc.), for example, is a force in the constraint ranking producing uniformed paradigms. Traditionally, such levelling processes would be considered to be analogical, and totally outside of the phonology. An OT account, presented by Raffelsiefen (2000: 2) assumes that the German Schwa alternation is the result of a conflict between prosodic well-formedness and *paradigm levelling*. This can account for the adjectival paradigm below:

(4.22)

dunkles

dunkle

dunkler

dunklem

dunklen

Raffelsiefen (2000: 9)

According to Raffelsiefen (2000: 9) uninflected forms, including the predicative, are not part of this paradigm, and are therefore not affected by paradigm levelling. The idea that these forms are not part of the paradigm appears to require stipulation. Raffelsiefen's defines a paradigm, for the purposes of paradigm levelling, as "...*the set of the inflected forms of a word whose distribution is determined solely by*

*agreement with another element within some grammatical configuration.*” (Raffelsiefen 2000: 145). This may appear to be unproblematic, but note that this includes only *inflected forms of a word*. Raffelsiefen makes a stipulation that enforces the *priority of the base* in this German example. However, when put in the context of parallel theories of OT, this is not an uncontentious stipulation. Certain monostratal parallel OT frameworks have celebrated the fact that apparently base priority violating processes within paradigms are better analysed under a paradigm levelling framework (Albright 2005, Kenstowicz 1996, McCarthy 2005a etc.), due to the indication that a theory in which priority of the base is naturally enforced is contradicted by these examples.

Paradigm levelling represents a symmetric correspondence relationship. Symmetric frameworks such as McCarthy’s (2005a) suggest that there should be no natural and unavoidable ‘base’ within a paradigm, as such forms of analogy, enshrined within the phonology itself, may flow from any other forms. It is worth noting that many OO-Correspondence frameworks do not suggest that the relationship between outputs is totally symmetric, for example, Benua’s (1997) Transderivational Correspondence Theory. However, such frameworks need to stipulate this asymmetry, which is done in Benua (1997) by means of recursive evaluation. Examples such as the one above from Latin provide evidence for the paradigm levelling analyses, as it appears to violate the priority of the base. If such a violation of this principle does occur in the Latin example, a paradigm levelling account must include the uninflected form *honor* in the paradigm, as is it is precisely the form which is targeted without phonological motivation. Assuming that paradigm levelling is the best account for the German and Latin examples, Raffelsiefen’s suggestion regarding the German data that the uninflected form *dunkel* should not be considered part of the paradigm indicates that the definition of a paradigm is largely constrained by what happens to be targeted within the language under discussion. In this aspect there may be a degree of circularity to the argument.

#### 4.4. EVIDENCE IN FAVOUR OF COPHONOLOGIES?

The question of why morphology and phonology become entangled as exemplified in the previous four sections links into the question of which morphophonological frameworks are the most successful at describing phonological change. It is certainly true that a number of frameworks are possible, and that there is no consensus regarding which is the best. However, I will try to discover, in this section, which out of cophonological analyses and morphological indexed constraints analyses best reflect the reality of what is going on within the grammar.

Recent work by Albright (2008) approaches this problem from a very interesting angle. I will briefly outline his work and the claims that follow. I will then consider its validity and the implications this approach may have for the examples I have been discussing. Albright's (2008) claim is that speakers do not divide the grammar along the lines of morphology simply as a result of overt evidence of a particular set of rules or word classes. Instead, he claims that a decision is made based upon the evidence of morphophonological distinctions across the language as a whole.

In a comparison to rule-based phonology, in which a process can easily be restricted to a particular class, Albright (2008: 1) draws attention to the various ways within Optimality Theory of dealing with class-specific phonology. These include, as discussed above, morpheme-specific constraints and cophonologies. An interesting problem that Albright focuses on is the problem of ascertaining when and why language learners determine that morpheme-specific grammars are required. This question is of great importance, as it links into the question of how morphophonology evolves.

Albright (2008) considers two approaches for describing why morphophonological patterns are learnt:

##### i. Top-down approach

Learners assume that patterns are general and reluctantly posit subdivided grammars only on the basis of overt evidence.

## ii. Bottom-up approach

Morphological classes are distinct and are only unified when necessary.

Albright, unconvinced that either i) or ii) is entirely correct, examines two contrasting cases. The first example involves Spanish conjugation classes. In Spanish, three verb classes are distinct, with a theme vowel between the stem and the present indicative person and number endings. The distribution of vowels in the final syllable of the stem shows significant class distinctions. In Class 1, high, mid and low vowels appear with approximately equal frequency. In classes 2 and 3 low vowels are less common. In Class 2, high vowel verbs are completely prohibited. Albright illustrates that these statistics are not accidental, and that native speakers are aware of the mid/high contrast. Many Class three verbs with mid vowels have undergone either raising or class change, showing that both phonological and morphological strategies have been employed to remove a phonological property which is at odds with a morphological category. Additionally, mid verbs remaining in Class three show synchronic alternations. Albright (2008: 3) suggests that this could indicate that there is a morphophonological division which is active in the grammar, and tentatively provides an interface analysis and a cophonological analysis for this problem:

(4.23)

a) Interface:

\*[+high]/Class 2, \*[+low]/Class 2, \*[+low]/Class 3, ...

|

F

|

\*[+high]/Class 1, \*[+low]/Class 1, ...

b) Cophonological:

Class 1: F  $\gg$  \*[+high], \*[-high, -low], \*[+low]

Class 2: \*[+high]  $\gg$  \*[+low]  $\gg$  F  $\gg$  \*[-high, -low]

Class 3: \*[+low]  $\gg$  \*[-high, -low]  $\gg$  F  $\gg$  \*[+high]

Alternations between diphthongisation and mid/high vowels also appear to be affected by these classes, with diphthongisation and raising being favoured in Class three, and with no alternation affecting the majority of classes one and two. Class three also shows very low numbers of verb stems with mid low /o/ vowels. In classes two and one, verb stems in /o/ typically do not alternate. According to Albright, it would be expected that, given the poverty of evidence for Class three /o/ verbs, speakers would assume that they do not alternate. Albright used verbs in /o/ from Class three which are not used in the present tense inflected forms to test how native speakers would generate a form which they would not have heard before. The speakers did not generalise the Class 1/2 pattern, but instead showed uncertainty about whether to diphthongise or leave the vowel unchanged. According to Albright (2008: 6), if we assume that morphologically based sub-grammars need to be posited based on overt evidence, these results are rather unexpected, and indicate that Spanish speakers tend towards splitting grammars along the lines of conjugation classes. This is a property that can arise in a language due to the fact that evidence for morphological splits is common within that language.

One potential problem with this view is that it follows that there should also be languages in which morphological divisions are resisted; even when overt evidence for a particular case is present. Albright claims that such an example exists, which involves the differences between nouns and verbs in English.

Albright (2008) claims that the large number of statistical verb/noun distinctions in English may be expected to provide enough overt evidence for native English speakers to have a morphophonological divide between nouns and verbs. Some examples of these overt differences are:



a). Stress. There are many examples in which verb stress and noun stress results in minimal noun-verb minimal pairs, e.g. *récord-recórd*.

b). Final fricative voicing. Verbs are more likely to end in voiced fricatives than nouns e.g. *advice-advise*

In order to test whether there is a grammatical division between the phonology of nouns and verbs in the minds of native English speakers, Albright used a series of nonce words presented as either nouns or verbs to ascertain whether this distinction affected the acceptability rating of the word. He claims that based on these tests, there is no clear link between phonotactic acceptability and word class. The implication for the grammar of English, according to Albright (2008: 13) is that it is a language that does not like to form morphological distinctions based on gradient statistical distinctions between word classes. If this assumption is correct, it leads to the question of why, given a certain amount of evidence, one language should resist morphological grammatical divisions and why others should not. The answer, according to Albright, is that the decision is made ‘globally’, i.e. that it is not necessarily the evidence of a particular process that is used in deciding whether to have a split grammar, but rather the evidence from the whole language. In terms of the approaches in i) and ii), this essentially means that some languages operate under framework i), and some under framework ii)

This view, he claims, is more in line with a cophonological analysis than an interface constraint one. This makes sense in that a cophonological analysis reflects the distinct grammars that have been set up across the language, without implying that it is *only* with respect to specific phonological constraints that a morphological pattern has emerged. Another benefit of the cophonological account is that the master hierarchy shows that it is the weakness and delicacy of a ranking that causes morphologisation. In the case of the West Saxon example above, an interface constraint analysis could include something like *PARSE-ǫfem*. We are put in a position where we have to suggest that one particular constraint is affected by morphologisation, and is referenced to a particular morphological category. Although, as explained above, this can predict the same outcome as a cophonology

analysis, it also makes some subtle inferences that should not go unnoticed. Since the effects of constraints can only be witnessed in the instance of their being ranked against one another, which constraint do we decide to attach morphological information to? We could, for example either use a *STRESSWELL<sub>neut</sub>* constraint or a *PARSE-σ<sub>fem</sub>* constraint to force exactly the same outcome. On the other hand, by using a cophonological analysis, we predict that it is the ranking that is unstable, rather than targeting one particular constraint and claiming, for example, that it can only become highly-ranked in the feminine. Consider the possibility of an interface constraint analysis for West Saxon. We have the following information to take into consideration (Scott 2005, Scott 2007):

(4.24)

(a)

Morphology:

feminine nouns	syncope
neuter adjectives	syncope
feminine adjectives	apocope
neuter nouns	syncope

(b)

Phonological constraints:

<i>PARSE-σ</i>	(apocope if ranked above <i>STRESSWELL</i> )
<i>STRESSWELL</i>	(syncope if ranked above <i>PARSE-σ</i> )

The feminine adjectives, in selecting apocope, appear to differ from the ‘norm’, simply in that syncope is the choice in other morphological environments. Additionally, independent morphological and morphophonological criteria can show that adjectives are more prone to morphologisation than nouns (as discussed briefly above). This point is not well represented in the interface constraint account, since only a specific constraint is indexed to this problematic morphological category. It is worth remembering that in order for the interface constraint analysis to work, we need something like a *PARSE-σ<sub>adj</sub>* as well as a constraint such as *PARSE-σ<sub>fem</sub>* in order to set apart the feminine adjectives in terms of apocope. The positing of two

morphologically specific constraints to deal with this morphological divide seems to be highly uneconomical,<sup>16</sup> as well as being stipulative, and limitless. Additionally, as indicated in Albright (2008) they do not represent quite so effectively the global nature of morphologisation within a language.

Albright's (2008) study is of great interest, and the use of 'wug' tests is highly valuable. It is worth asking, however, whether the two phonological issues being examined in Spanish and English are totally comparable for this purpose. There is a possibility that phonotactic acceptability judgments are less likely to show evidence of morphological divides than processes of inflection (such as, in this case, retrieving the 3<sup>rd</sup> plural in verbs), due to the fact that the phonotactic acceptability of uninflected verb and noun forms represents arguably more robust phonology. Albright notes (2008: 4) that in Spanish Class 3 is unproductive, and it is small in number compared to Class 1. It is not surprising in this case that speakers find it difficult to be certain of what processes inflectional forms may trigger. The situation in English, however, shows that speakers do not display differing acceptability judgments for nouns and verbs, despite statistical differences. Albright's (2008) experiment certainly indicates that statistical information alone does not cause morphophonological divides, and provides some interesting evidence in support of the 'global' grammatical division framework. In terms of the Old English paradigms, this study intends to reveal not only the behaviour of vowel deletion within a synchronic grammar, but also across two distinct dialects. If morphologization takes place in one, and not the other, given similar conditions, this would have implications for the idea of 'global' grammatical division. I will show, in Chapter 8, that such a distinction does exist between EWS and *Li*, in which HVD spreads to a new domain in EWS, but not in *Li*. The possible reasons for this will be considered.

#### 4.5. VARIATION IN PHONOLOGICAL THEORY

Many of the phonological processes that have been examined in this chapter, as well as those that will be discussed in later chapters, are variable. The Finnish example of

---

<sup>16</sup> It would be possible to use a constraint such as *PARSE-ŏ<sub>fermAdj</sub>*. This would allow a constraint to be very specifically targeted, raising the question of how this framework can be constrained.

morphophonological conditioning, when it comes to trisyllabic forms, exhibits variation, with Anttila (2002a) only noting phonological tendencies, in addition to the morphological condition. HVD is another process that in many varieties of OE is variable, with the prosodic conditions motivating deletion, but not in every token. The analysis illustrated in (2.48), as demonstrated, forces weight-conditioned high vowel deletion in the appropriate forms. However, there is another significant issue relating to the analysis that has not yet been addressed; that of variation.<sup>17</sup> The reader may at this point question whether high vowel deletion, when applying, is an obligatory process, as is implied by the OT tableau in (2.48). As the data in chapters 6, 7 and 8 will reveal, it is not. The OT analysis presented in Section 2.5 would not allow for such variation, and therefore more complex theoretical machinery is required, which will be the focus of this section. I will begin by discussing how variation has been accounted for in rule-based accounts, before moving onto OT descriptions. Before the advent of OT, rule based accounts such as the Variable Rule model (VR) (Labov 1969, Cedergren & Sankoff 1974) were argued to be able to account for synchronic variation, and it has been claimed that such accounts are superior to OT (Guy 1997). The VR model, in contrast to standard generative phonology, assumes that rules may vary in strength. The variable rules describe a preferred phonological state. The output of the rule is then subject to constraints also describing preferred or unpreferred phonological states. Both the rules, and the constraints are assumed to be variable in a sense similar to that in OT, that is, they can be violated (Guy 1997: 335). This variation can be probabilistically quantified, with some rules and constraints being more or less likely to apply than others. One difference between OT and VR that is important is that while OT assumes that all constraints come as a part of UG, VR assumes that some constraints are universal, while allowing some to be language specific. An example, given by Guy (1997: 338) is the constraint banning /tʌ/ onsets in English, which he argues cannot be assumed to be universal. Guy argues that the proposed universality of all constraints in OT is a

---

<sup>17</sup> This discussion of modelling variation in phonological theory will focus primarily on the kind of variation found within an individual. I therefore make the assumption that the variable processes in question may vary within a single grammar, which can be shown by the attested data within texts with a single scribe, such as the Lindisfarne Gospels. I will also discuss inter-speaker variation in Chapter 9, in which I will consider whether the differing ways in which two varieties behave in the face of opacity can shine any light upon phonological change.

problem, and that the lack of surface evidence in many languages for certain constraints cannot be put down to low ranking without a degree of unfalsifiability. I would argue, though, that the universality of constraints has been beneficial in phonological theory, as it has necessitated the seeking of typological backing wherever possible for proposed constraints. In contrast, a problem with the VR model is that in allowing for language-specific non-universal constraints, as well as universal ones, it imports some of the stipulation of standard generative phonology.

When talking about variation, we may refer to variation between speech communities, variation between members of a speech community and variation within a speaker. The latter is the main focus of the discussion here, but in relation to the first and second types, Guy (1997: 338) discusses a significant distinction between VR and OT, that is, that OT describes both types as being the result of different constraint rankings, while VR assumes that while constraint weights might differ between whole speech communities, they are fixed within a speech community. Thus, inter-speaker variation is assumed to be the result of input probability. To illustrate this, Guy provides the example of English coronal stop deletion. Throughout the speech community, preceding obstruents are more likely to trigger deletion than preceding sonorants. The deletion rates differ between speakers, but no speakers exhibit higher rates of deletion following sonorants than obstruents. Guy (1997) argues that OT cannot model a variation situation in which the deletion environment is fixed, and in which the variation only involves frequency. This assertion has since been shown to be incorrect, by such advances in the use of OT in modeling frequency variation as Boersma (1997), which I will discuss later in this chapter. Guy's point does, however, correctly highlight the shortcomings of classic OT, including the problems faced when describing the increased probability of deletion in monomorphemic forms such as *mist*, compared to derived forms such as *missed*. In later sections, after the OT models dealing with variation have been discussed, I will briefly demonstrate that the variable stop deletion in *mist* and *missed* can be described in terms of OT, though the use of recent developments in OT is necessary.

The issue of variation in phonology has been the subject of debate in recent Optimality Theory, and a number of modifications of the theory, as well as related

theories such as Harmonic Grammar (Coetzee 2009) have been posited with the aim of describing phonological processes that are successful in only a certain percentage of utterances. When we look at HVD, different rankings are required to cause the outcome with failed deletion and the outcome in which deletion proceeds. The example in this tableau is a weak preterite with a heavy stem: *hīer+ede* ‘heard’. This form would therefore be subject to HVD, according to the traditional definition of the process:

(4.25)

(a)

MAX-V<sup>2</sup> » STRESSWELL » PARSE-Ń » MAX-V » PARSE-σ (*Deletion applies*)

(b)

<i>hīer+ede</i> ‘heard’	MAX-V <sup>2</sup>	STRESSWELL	PARSE-Ń	MAX-V	PARSE-σ
[ <sub>ω</sub> [.hi:e.].re.de.]			**!		**
[ <sub>ω</sub> [.hi:er.].Ø de.]			*	*	*
[ <sub>ω</sub> [.hi:er.]d]	*!			**	
[ <sub>ω</sub> [.hi:e.].red Ø.]		*!		*	*

(4.26)

(a)

MAX-V<sup>2</sup> » STRESSWELL » MAX-V » PARSE-Ń » PARSE-σ (*Deletion fails*)

(b)

<i>hīer+ede</i> ‘heard’	MAX-V <sup>2</sup>	STRESSWELL	MAX-V	PARSE-Ń	PARSE-σ
[ <sub>ω</sub> [.hi:e.].re.de.]				**	**
[ <sub>ω</sub> [.hi:er.]. Ø de.]			*!	*	*
[ <sub>ω</sub> [.hi:er.]d]	*!		**		
[ <sub>ω</sub> [.hi:e.].red Ø.]		*!	*		*

The task is therefore to represent within OT a situation in which both forms surface. It is therefore necessary, according to Boersma (1997: 44), to allow for both grammars at the same time. One potential solution that Boersma (1997: 44) discusses is to have the relevant contrasting constraints ranked equally high. This relies, he notes, on the assumption that equal ranking operates on a probabilistic manner, that is, that if two constraints are ranked equally high, there will be a 50/50 chance of one outcome or the other. This is in contrast to the assumptions held in Tesar & Smolensky (1993), who assume that equal ranking would result in the violation marks of the two constraints cancelling each other out. This is a rather basic approach, in that it modifies OT as little as possible, though it seems that this comes at the expense of descriptive power. The problem that Boersma (1997) goes on to tackle is that it is commonly the case that two constraints that produce variable results commonly produce unbalanced rates of one or the other outcome, for example, with 80% of cases weighted in favour of one option. To have simply two constraints equally ranked implies an equal probabilistic chance of either outcome, and therefore, in order to represent cases in which this does not happen, more sophisticated machinery is required. We will see that this debate is relevant to the Old English data, as many of the phonological processes described in chapters 6 to 8 do not reflect a 100% success rate. In this section I will not go into detail about the phonological processes showing variation in the Old English data: the analyses can be found in chapters 6–8. However, I will briefly outline some of the relevant points:

- We see a 95.8% rate of syncope in heavy Class 1 preterite verbs within Lindisfarne.
- There is a 55% rate of syncope in heavy inflected Class 1 weak past participles in Early West Saxon.

The deletion processes within these morphological categories, as we will see in chapters 6 to 8, can be demonstrated to represent true weight-conditioned high vowel deletion. This point is verified by the weight condition that is shown to exist: deletion is significantly more likely to occur after heavy syllables than light ones. Given the varying success rates of syncope, it is clearly the case that a theory that assumes that a process with a variable success rate should exhibit a 50% failure rate

is not detailed enough to fully account for the data. Therefore, the modeling of variation, and in particular, the modeling of specific levels of variation will be the priority here. It has also been argued (Coetzee 2009: 272) that an account of linguistic variation must also be equipped to describe factors influencing variation that come from outside of the grammar. However, extra-linguistic factors, though interesting, are not of crucial importance here due to the limited registers of the texts and the absence of factors such as speech rate. This issue will therefore be put aside in the present discussion, as the data can shine no light on it.

In comparing the abilities of various theoretical approaches to variation, I will discuss some of the examples of variation found throughout the literature. When using high vowel deletion as a case study, I will refer to ‘simple’ high vowel deletion as a case study. Simple here means high vowel deletion applying in a morphological category within which it is actively weight conditioned, in forms that do not present the environments for further phonological conditioning (i.e. no dental forms, no obstruent + sonorant clusters etc.). The account that will be provided for high vowel deletion, in all of its more complex forms as well as here, has already been discussed in Chapter 2. As such, the ranking, repeated from Section 2.5 is:

(4.27)

MAX-V<sup>2</sup> » STRESSWELL » PARSE-Ǿ » MAX-V » PARSE-σ

As discussed above, the problem with this ranking in its current form is that it implies that in 100% of cases, PARSE-Ǿ triggers deletion of unfooted, light vowels. This is of course not the case, as, for example, 45% of target forms in weak past participles in Lindisfarne remain undeleted.

One method for dealing with variation that makes minimal amendments to OT assumes that variation stems from *tied violations*. I will provide a brief overview of the framework, before assessing whether it is adequate in accounting for the variation in HVD.

#### 4.5.1. *Tied violations*

Within this framework, two or more candidates receive exactly the same violations with respect to all of the constraints in the grammar. An example that demonstrates



how *tied violations* can model variation is discussed in Anttila (2002b: 215–217), and also Hammond (1994). The data Anttila (2002b) refers to come from Hudson & Richards (1969). The example involves variable stress in Walmatjari. The stress patterns are as follows:

- Two-syllable words: main stress falls on the first syllable.
- Three-syllable words: main stress may fall on the first or second syllable, with most words showing variable pronunciation.
- Four-syllable words: main stress can fall on the first or second syllable, with some words showing variable pronunciation.

(4.28)

- a. 'yapa 'child'  
'palma 'creek'
- b. 'manalu/ma'nalu 'we' (p. excl)-him  
'yutanti/ yu'tanti 'sit'
- c. 'paljmanana/ palj'manana 'touching'  
'tunmanana/tun'manana 'burying'

(Anttila 2002b: Fig 11, Pg. 216)

Not only should an account of these alternations reflect the variability, but ideally it should answer some other questions. Anttila (2002b: 216) asks: why does it vary between the 1<sup>st</sup> and 2<sup>nd</sup>, rather than between any others? Why is there only variation in words longer than two syllables?

Anttila notes the benefits of using an OT account to explain the motivations behind the pattern, in terms of universals. Within the discussed *tied violation* account, the two or more relevant candidates cannot be distinguished by the grammar, resulting in the correct prediction that both will surface. The analysis (Hammond 1994, repeated in Anttila 2002b: 216–217) has the benefits of being able to correctly model the variation, while providing insight into the universal principles that cause the seemingly inconsistent patterns. These universal principles take the form of constraints on foot well-formedness constraints:

(4.29)

TROCH

FTBIN

\*LAPSE

Feet are left-headed (trochaic)

Feet are binary

No sequences of two unfooted syllables

These three constraints, ranked in any order, correctly predict that a disyllabic form such as /yapa/ will result in a trochaic output. This is non-variable.

(4.30)

(a)

/yapa/	TROCH	FTBIN	*LAPSE
ya.pa			*!
['ya.pa]			
ya['pa]		*!	
['ya]['pa]		**!	
[ya.'pa]	*!		

Anttila (2002b: 216)

The variable forms, which are the tri- and quadrasyllabic words exhibit primary stress on either the first or second syllable, which is predicted using the same constraints:

(b)

/yutanti/	TROCH	FTBIN	*LAPSE
yu.tan.ti			**!
['yu.tan.]ti			
yu['tan.ti]			
yu.tan.['ti]		*!	*
['yu.]['tan.ti]		*!	
['yu.]tan.['ti]		**!	
yu.['tan.][ti]		**!	
['yu.]['tan.]['ti]		***!	
yu.[tan.'ti]	*!		

Once again, whatever the ranking, these constraints will result in the same successful candidates. Note that the two variably produced candidates are exactly those that tie in terms of avoiding violation marks. It is of course the case that this model makes no prediction at all about the actual probability of the process, which is problematic. Despite its benefits in terms of the variable stress example, this is not the model that Anttila (2002) advocates, and he goes on to note a particularly serious problem: tied violations will only work when using a small selection of relevant constraints. Since all constraints are expected to exist universally, it is highly unlikely that some very low-ranked constraint would not be able to force a clear winner. Consider, for example, what would happen if ['yu.tan.]ti and yu['tan.ti] were tying almost all the way down the constraint hierarchy, until reaching a problematic constraint. If NONFIN is included within the hierarchy, even at a low level, without competition, it would cause yu['tan.ti] to be ungrammatical.

Two problems with this framework have been discussed; firstly, that low-ranked constraints are likely to force one winner, thus falsifying the approach. Secondly, the lack of ability to model different probabilities. A third problem is that there are surely instances of variation in which there simply are no tied violations. An example where a constraint is either violated by both candidates, or unviolated by

two candidates may work in some cases, but how would this work in the case of phonological repair processes? If we look at high vowel deletion, the two competing candidates involve either the violating or observance of *PARSE-σ*, so tied violations would not work. As soon as the most relevant constraint is placed anywhere within the hierarchy, the method fails.

#### 4.5.2. *The Multiple Grammars Model*

Another theory for modeling variation is the Multiple Grammars Model (MGM) (Anttila 2002b: 219, Kiparsky 1993b). Under this framework, it is assumed that variation is the result of different grammatical systems within the speaker's grammar. In this thesis, the idea that competing grammatical systems can exist within an individual has also been defended with respect to cophonologies (Anttila 2002b). The difference in that case is that the grammar itself has a master hierarchy leaving certain rankings unspecified, and speakers select one of the possible rankings for different morphological categories. It is assumed by MGM, on the other hand, that the speaker generates variable outputs based on distinct rankings. Unlike the cophonological analyses presented in later chapters, these distinct rankings need not be limited to morphological categories, and hence speakers have distinct grammars operating at the same time, and within the same domain, resulting in variation. For example, to return to the PDE coronal stop deletion example raised earlier in the chapter, it is possible to assume that variation stems from the following competing rankings:

(4.31)

ONSET	Syllables must have an onset.
*CXCOD	No coda clusters.
MAX(C)	No deletion of consonants

Input	Tableau	Output
a. /mist/	ONSET >> *CxCoD >> MAX(C)	[mis]
b. /mist/	ONSET >> MAX(C) >> *CxCoD	[mist]
c. /mist/	MAX(C) >> ONSET >> *CxCoD	[mist]

(Anttila 2002: Fig. 16, Pg. 219)

According to Anttila (2002b: 219) this model assumes that for each speaker, any tableau is a possibility, and each time a speaker performs an utterance, they reach into the grammar pool to select a tableau. Variation is not free, however, because of the bias affecting the grammar pool. Anttila therefore assumes that frequency will be relative to the number of grammars in the grammar pool that would result in a possible output. In the example above, he claims, since two of the three grammars would produce [mist], we should expect to see approximately two thirds of attested forms lacking deletion. Anttila (2002b: 220) refutes claims that this could potentially lead to too many grammars, on the basis that it has not yet been determined how many grammars would indeed be too many. Another criticism has been that any form of variation would be permitted (Lieberman 1994). If variation is the result of any possible rankings competing against each other, why are some phonological processes non-variable? Secondly, out of those processes that are variable, why is variation so restrained? It appears to be the case that this model is in need of constraining in order to answer these questions. Anttila (2002b: 220) argues that constraints, both morphological and phonological, result in bias in the system that prevents it from predicting the free variation that would be so problematic. He also highlights the effect of non-linguistic factors, such as register and age etc. These non-grammatical factors will not be discussed here, as the present study does not assess such factors for the reasons outlined above. The grammatical morphological and phonological constraints, and the assertion by Anttila (2002b) that the MGM is constrained by inherent factors within the grammar will be discussed here.

#### 4.5.2.1. Phonological constraining

The first kind of variation that needs to be ruled out is that which leads to unnatural patterns. For example, in the case of *t,d* deletion, it would be highly worrying if the model predicted that attested forms would appear that show \*CxCOD being satisfied by resyllabification such as [mis.t]. Also problematic would be the prediction that consonants would be more likely to be deleted before a vocalic onset than a consonantal onset (Anttila 2002b: 222). Anttila (2002b) determines a *factorial typology* for the set of constraints, which represents the total number of different ways in which they can be ranked.

Anttila (2002b) observes that there are nine logically possible grammars, some of which are highly unnatural. Fortunately, for the multiple grammars model, the most worrying potential patterns are shown to be excluded by the factorial typology of OT tableau for *t,d* deletion. For the five constraints in question, there are 120 possible rankings. Only five potential grammars are predicted. None of these rankings will allow for a dialect that results in pre-vocalic deletion but pre-consonantal resyllabification: (*cos.Anna*), (*cos.tme*) (Anttila 2002b: 223). This restriction stems from the universal nature of constraints. This result, Anttila (2002b: 223) concedes, does not rule out all odd predictions, but in ruling out the worst, it makes the framework potentially workable. The problematic predictions are related to the vowel/consonant asymmetry that is attested in English. The model predicts that there will be dialects that show variable consonant deletion, resyllabification and final complex coda clusters, but with no reference to the status of the following segment; whether it is a vowel-initial word or a consonant-initial one. Anttila (2002b: 224) suggests that that this may be because constraints relevant to *t,d* deletion have not been included in the grammar. The question remaining is what would happen if all of the relevant constraints were included in the rankings. Three patterns in which no difference between consonant onsets and words beginning with vowels, e.g. *cost me*, *cost Anna*, were predicted. The patterns predicted were as follows:

(4.32)

Anttila (2002b: 224)

	Output #1	Output #2	Output #3	Output #4	Output #5
/cost#an/:	[cost.V]	[cos.tV]	[cos.tV]	[cos.tV]	[cos.V]
/cost#me/:	[cost.C]	[cost.C]	[cos.tC]	[cos.C]	[cos.C]

A constraint such as COMPLEXONS, which penalises complex onsets is perhaps too general on its own, as the phonology of English treats [tr] and \*[tm] onsets differently. Further examination of the corpora in question might reveal whether this distinction is relevant to /t,d/ deletion. What would happen if we introduced more specific phonotactic constraints into the ranking? By introducing further constraints that are likely to be relevant, the number of possible tableau naturally increases massively. I have analysed the extended set of constraints using OtSoft (Hayes, Tesar, and Zuraw 2003), following the same method as described in Anttila (2002b). The resulting patterns are shown in (4.34). Let us consider the effect of the following two constraints, which are tentatively posited here since their effects appear to be in evidence in the coronal stop deletion alternations.

(4.33)

(a)

CONTACT      No rising sonority across the syllable boundary

(b)

\*[tm      No onsets with a *tm* cluster

By adding two constraints, CONTACT and a phonotactic constraint banning [tm]<sup>18</sup> onsets, the number of possible rankings increases to 720. However, the number of expected patterns is reduced from five to four:

---

<sup>18</sup> Detailed corpus studies would be required to ascertain how many of the consonantal forms would create a forbidden syllable onset when combined with the /t,d/. Instances allowing them are likely to be low; limited to [tr], [dr] and [dw]. A variation on this phonotactic constraint is therefore relevant to the majority of combinations.

(4.34)

CONTACT and \*[tm

	Output #1	Output #2	Output #3	Output #4
/cost#an/:	[cos.tV]	[cos.tV]	[cos.tV]	[cos.tV]
/cost#me/:	[cost.C]	[cos.tC]	[cos.C]	[co.sC]

As the reader will instantly see, this has been over-powerful. It has been successful in that it has enforced an asymmetry between vowels and consonants, but it has actually resulted in a factorial typology that allows for no deletion in vowel-initial forms. It is the effect of the \*[tm constraint that has caused the factorial typology to be overly restricted. It is perhaps the case that this is a system what only works with a small subset of constraints, which may not include even the whole set of relevant constraints to a given process. Anttila (2002b) does note that constraints that are relevant may not have been included in his analysis, though he assumes that this is the cause for his under powerful result. It has, however, been shown in this section that the introduction of potentially relevant constraints has caused the multiple grammars theory to be instead over powerful. Anttila & Cho (1998: 32) observe that sonority is indeed a factor in determining the occurrences of deletion.<sup>19</sup> As stated above, specific examination of the corpus would be required to confirm whether the additional constraints proposed here are indeed relevant, but if they are, it appears to be the case that the method is not too weak, but too powerful. The method does, however, benefit from an important element of Optimality Theory; it rules out unnatural grammars.

#### 4.5.2.2. Morphological constraining

One of the earlier criticisms of classic OT, was that it could not account for the morphological conditioning upon the variation between deletion in *mist* and *missed* (Guy 1997). Later models of OT have addressed this problem. When Anttila (2002b)

---

<sup>19</sup> It must be noted here that the introduction of CONTACT, which incorporates sonority into the account does not render the account too powerful; in fact, when added to the constraint list on its own, it had no effect on the factorial typology, and yielded the same five grammars found in Anttila (2002b).



addresses the question of how morphological effects influence variation, the account presented is one that uses morpheme specific constraints (Kiparsky 1993b). This is in order to reflect the way in which deletion is more likely to affect monomorphemic forms (e.g. *cost*) than inflected forms (e.g. *lost*), with regularly inflected forms (such as *tossed*) being the least likely to undergo deletion. This system is of course able to represent a grammar in which deletion is less likely to target morphologically complex words, but it leads to the question of whether it is beneficial for OT to be able to include constraints that can apply directly to morphological categories. The ranking of the constraints  $*CxCOD^{ROOT} \gg *CxCOD^{STEM} \gg *CxCOD^{WORD}$  will result in the same pattern whatever the order, as there is inherent ordering within the relevant words (i.e. *cost* would incur violations for having a complex coda, and more for having a complex stem, and more again for having complexity at the root level).

#### 4.5.3. Partially Ordered Constraints

A constrained version of MGM (Anttila 2002b) is *Partially Ordered Constraints* (e.g. Anttila & Cho 1998). The example provided in Anttila & Cho (1998) involves for *r* insertion/deletion in varieties of English. I will now briefly recount this example, and the way in which Partially Ordered Constraints can be used to model variation. Certain varieties of English show no insertion or deletion, but others exhibit a phonologically conditioned process. Underlying coda /r/ is deleted, while intrusive *r* surfaces in similar conditions to which underlying *r* remains. The conditioning involves the nature of the following syllable; if the following syllable is consonantal, *r* is deleted and if the following syllable is vowel initial, the *r* is deleted (or not inserted, if not present underlyingly). Three non-variable systems are attested (Anttila & Cho 1998: 33):

(4.35)

System	Wanda left V+C (no underlying /r/)	Homer left /r/+C	Wanda arrived V+V (no underlying /r/)	Homer arrived /r/+V
A	∅	[r]	∅	[r]
B	∅	∅ (del.)	∅	[r]
C	∅	∅ (del.)	[r] (insertion)	[r]

In terms of OT, the three constraints used in Anttila & Cho's (1998: 34) analysis are ONSET, \*CODA and FAITH:

(4.36)

\*CODA            Syllables must not have codas.

FAITH            No deletion or insertion.

Since dialect A preserves the underlying forms at the detriment of \*CODA and ONSET, it is clear that FAITH is ranked most highly (Anttila & Cho 1998: 34). Dialect B has a pattern of deletion before consonants, but no insertion, which means that \*CODA is ranked above FAITH. FAITH is outranked by both of the relevant markedness constraints in Dialect C, resulting in insertion and deletion. According to Standard OT, all constraints within a grammar are ranked with respect to every other constraint. For Dialect C above, Anttila & Cho (1998: 36) illustrate this as follows:

(4.37)

Ranking: (a) \*CODA >> ONSET, (b) \*CODA >> FAITH, (c) ONSET >> FAITH

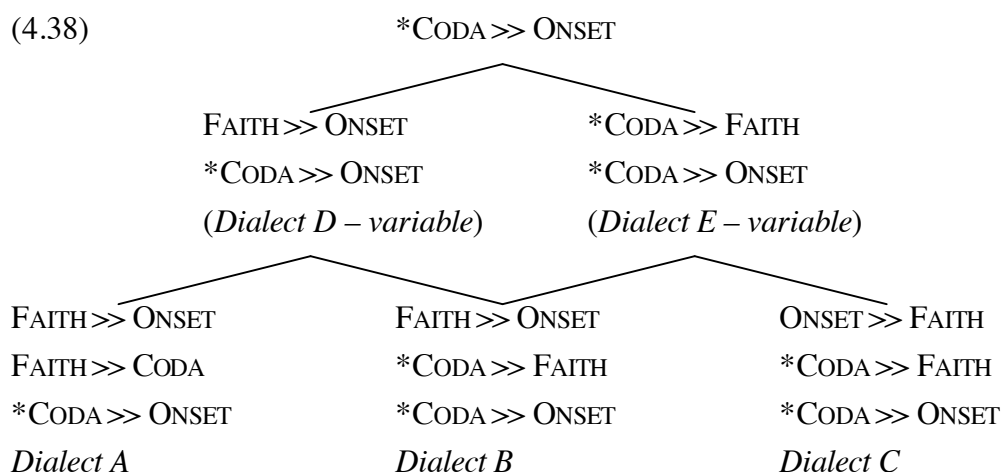
*CODA	ONSET	FAITH
-------	-------	-------

Tableau:

Anttila & Cho (1998: 36)

In contrast to this, Anttila & Cho (1998: 36) assume that not all of these ranking relations hold. In particular, for Dialect C, ONSET >> FAITH can be removed from the total order, with the result that \*Coda still outranks both constraints, but that Onset

and Faith are not ranked with respect to one another. This entails two tableaux; one with ONSET >> FAITH, and one with FAITH >> ONSET. Removing another ranking, \*CODA >> FAITH, will result in three total orders, rendering the ranking of \*CODA totally free (Anttila & Cho 1998: 37), while removing the final ranking results in the total of six partial orders. This can be represented in the form of a *grammar lattice* (Anttila & Cho 1998: 38):



Modified from Anttila & Cho (1998: Fig. 10, P.38)

The three dialects discussed above are non-variable, and are represented by the lower nodes of the tree diagram. Recall that two variable dialects also exist. These are represented by the upper nodes of the tree, and labelled as Dialects D and E. Dialect D dominates Dialects A and B, and does not specify a ranking between FAITH and \*CODA. As such, it exhibits variation between /r/-deletion before consonantal words, e.g. *home(r) left*, and /r/ retention in satisfaction of FAITH. Dialect E, on the other hand, dominates dialects B and C, and does not specify the ranking between ONSET and FAITH. This results in a variable process of /r/ insertion before vowel-initial words.

Anttila & Cho (1998) argue that the degree of variation can be predicted by the number of tableaux in which a candidate wins, divided by the total number of tableaux. According to Anttila & Cho (1998: 39), this means that in the /r/-insertion/deletion example, a dialect in which both processes are optional should be predicted to exhibit twice as many occurrences of deletion than insertion. This

contrasts with the unconstrained Multiple Grammars Theory, within which it is not possible to predict just how strong a variable process will be in terms of frequency.

In order to put this framework in the context of the Old English data, we will now attempt to define the variation of syncope in terms of Partially Ordered Constraints. I will not present a detailed analysis of the OE data at this stage, but will instead present an analysis that can merely account for variation of HVD. This is therefore a progression of the basic account presented at the end of Chapter 2. The example used is a heavy inflected Class 1 weak past participle: *dōeman* ‘judge’ nom.pl.neut. *dōemedo* vs. *dōemdo*, [<sub>ω</sub>[.do:e.].me.do.] ~ [<sub>ω</sub>[.do:em.].do.]. The ranking that enforces high vowel deletion, repeated from Chapter 2 Section 2.5 is:

(4.39)


MAX-V<sup>2</sup> >> STRESSWELL >> PARSE-Ǿ >> MAX-V >> PARSE-σ

The sub ranking of importance is PARSE-Ǿ >> MAX-V, which, if reversed, would cause deletion to fail:

(4.40)

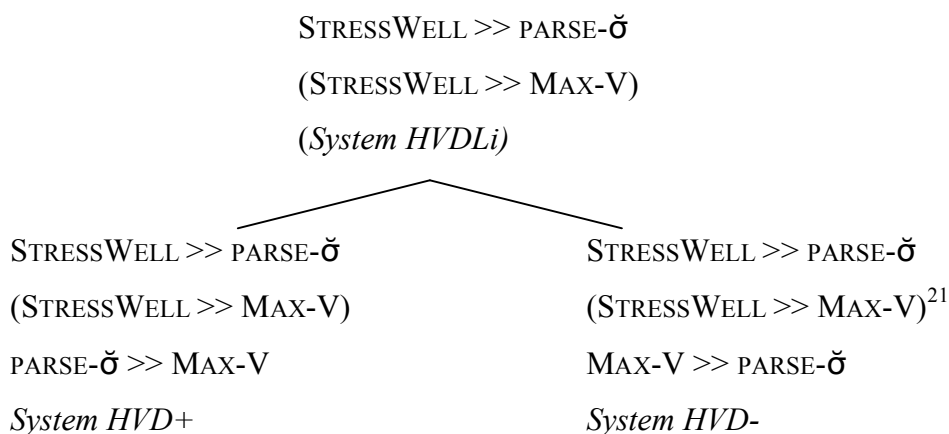
/do:em+ed+o/	MAX-V <sup>2</sup>	STRESSWELL	MAX-V	PARSE-Ǿ	PARSE-σ
[ <sub>ω</sub> [.do:e.].me.do.] dōēd				**	**
[ <sub>ω</sub> [.do:em.].do.]			*!	*	*
[ <sub>ω</sub> [.do:e].med.]		*!	*		*
[ <sub>ω</sub> [.do:em.]d]	*!		**		

(4.41)

/do:em+ed+o/	MAX-V <sup>2</sup>	STRESSWELL	PARSE-Ǿ	MAX-V	PARSE-σ
[ <sub>ω</sub> [.do:e.].me.do.]			**!		**
[ <sub>ω</sub> [.do:em.].do.] 			*	*	*
[ <sub>ω</sub> [.do:e].med.]		*!		*	*
[ <sub>ω</sub> [.do:em.]d]	*!			**	

For the sake of simplicity, I will remove some of the constraints not directly involved in the variable process, such as MAX-V<sup>2</sup> and PARSE-σ, focussing instead on STRESSWELL, PARSE-Ǿ and MAX-V. We will propose two invariant systems, one with high vowel deletion and one without, which we will label HVD+ and HVD-. The system with variation; the attested system in Lindisfarne past participles will be labelled HVD*Li*.<sup>20</sup> Note that this is a simplified diagram, and that a third pattern, not relevant in the verbs, would also predict final rather than medial deletion.

(4.42)



In both invariant systems, STRESSWELL would remain above PARSE-Ǿ, as syncope rather than apocope is the form of high vowel deletion that is relevant here, though

<sup>20</sup> Note here that Lindisfarne also has near-invariant systems of high vowel deletion. This labeling is therefore not intended to represent the behaviour of high vowel deletion in Lindisfarne in general.

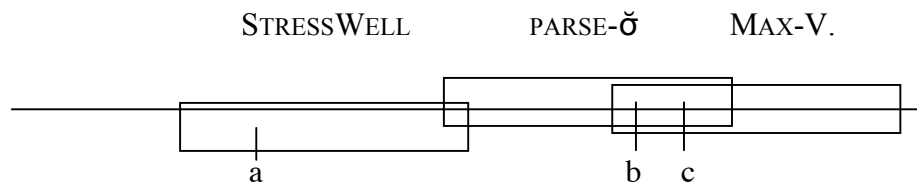
<sup>21</sup> The brackets here signify that this ranking is of no consequence in our tableaux.

other word classes and dialects do indeed show such a competition. A third system that is predicted by the framework, with apocope rather than syncope, is therefore actually attested in other word classes. The unspecified ranking relating to our case of syncope variation is  $\text{PARSE-}\check{\text{O}} \gg \text{MAX-V}$ .

#### 4.5.4. Stochastic OT

The final variation model that will be discussed here is Stochastic OT (Boersma 1997). In Stochastic OT, constraints are assumed to be ranked along a continuous ranking scale, rather than ranked strictly in relation to each other. Certain constraints can therefore be ranked more closely to each other than others. Boersma (1997: 46) argues that children learn that a constraint ranking is optional, and will learn not only that it is optional but also will copy and learn the degree of optionality. In order to do this without demoting constraints to the extent that they fall down the ranking, the adjustments must be small. Formally, small elements of ‘noise’ in the form of numerical figures are added to the continuously ranked constraints to influence the likelihood of one constraint outranking another.

(4.43)



Our variable process, outlined above, would be represented in the following way within a continuous ranking scale. The *selection point* (Boersma & Hays 2001) is based upon the actual ranking value assigned, and is represented here as *a*, *b* and *c*.

One benefit of this framework is that it has been shown to be learned successfully by a Gradual Learning Algorithm (Boersma 1997, Boersma & Hays 2001). One criticism of this framework (e.g. Anttila 2002: 225) is that it has greater implications for OT than some of the other frameworks discussed, as it employs the use of numerical ranking values within the OT grammar. However, the numerical

aspect is successful in being able to describe instances of variation in which, for example, only 15% of forms are targeted by a form. Another benefit of Stochastic OT is also that the gradience of constraint rankings appears to be intuitively learnable. When a learner hears enough variable data, they assume that the distinct forms are permitted, and thus construct a grammar in which the constraints are on a gradient scale. We can assume that overlapping constraints can remain stable for many generations of learners. The fact that stochastic OT has not been shown to be over powerful in ruling out variants, that it can account for subtle degrees of preference for one variant over another, and that it has an associated learning algorithm will be taken as justification enough to proceed with a stochastic OT account for the present data. A stochastic model, in conjunction with stratal OT can model the problematic *mist/missed* variation by assuming that different strata show different degrees of overlap on the continuous ranking scale.

(4.44)

(a)

	<i>mist</i>		<i>missed</i>	
Level 1	mist	[mist]	miss	[mis]
Level 2	mist	[mist]	miss+ed	[mist]

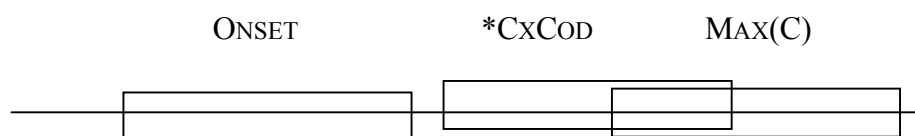
(b)

Deletion: ONSET >> \*CxCOD >> MAX(C)

No deletion: ONSET >> MAX(C) >> \*CxCOD

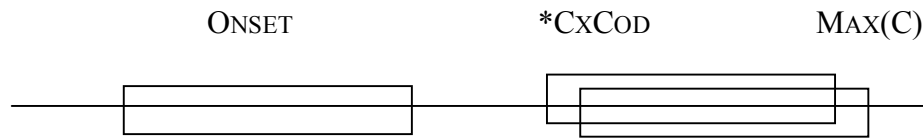
(c)

Level 1 (higher likelihood of deletion)



(d)

Level 2 (lower likelihood of deletion)



An analysis such as the one illustrated here allows for a higher likelihood of deletion in underived forms. It assumes that the process is active at both levels, but illustrates that the process is exhibiting morphological restriction. The increased likelihood at Level 1 reflects the assumption made in Zec (1993) that from a stratal perspective, phonological processes tend to climb the levels. Stochastic OT allows us to model such developments in progress, at the stages in which variation is in place. In the case of coronal stop deletion, the universal condition against complex codas is well suited to OT, in which the assumption of universality is important. The phonological motivation would be well suited to Neogrammarian analyses, however, a morphological condition is clearly emerging. The morphological restriction may be argued to follow from the learner's primary linguistic data, in which the morphologically derived forms undergo deletion less. Just as there is a phonological reason for the deletion, there is also likely to be a morphological motivation for the failure of deletion in *missed*, in that morphological information is potentially wiped out when deletion applies in *missed*, which is not the case in the underived *mist*. Subsequently, this morphologically influenced failure of deletion causes a degree of opacity, and the process begins to climb the levels.

#### 4.6. CHAPTER SUMMARY: THE FRAMEWORK THAT WILL BE ADOPTED IN THIS THESIS

In this chapter I have discussed a range of examples of morphologisation that are argued here to demonstrate that a) a phonological theory should allow for more than one grammar to operate at the same time, within distinct morphological categories, and that b), as phonological processes lost their robustness, they are more likely to percolate deeper into the grammar, and may show morphological conditioning and c) that by studying varieties of a language, different pathways might be revealed in



terms of the development of a phonological process. I intend to follow the framework which can not only describe the phenomena, but that also has something to say about why morphophonology evolves this way. Additionally, economy is something that must be taken into account, though not at the expense of revealing complex interactions. Finally, I have discussed variation in phonological theory, focussing in particular on how to model a phonological process with variable results within a single speaker.

Anderson's (1988: 349) insights into the way in which morphological change progresses are of great interest. In his view, morphological change arises due to the introduction of unsustainable opacity. This fits intuitively with Anttila's (2002) *Emergence of morphology*, in which morphological divides arise when phonological conditions are at their weakest. Morphologisation therefore occurs when a morphological distinction is included in the most easily learnable grammar. As discussed above, the cophonological analyses show certain advantages in representing this intuitively over the morphologically indexed constraints.

On the theoretical question, we can consider two divides: Firstly, we have the frameworks which allow only Input-Output correspondence, as opposed to OO-correspondence theories. The second divide is between morphologically indexed constraints and cophonologies. More broadly speaking, it is necessary to consider whether a framework should reject morphological information within phonological constraints, and also whether correspondence relationships between outputs are preferable.

As shown in the discussion about German Schwa alternations, paradigm levelling appears to require stipulation to prevent the uninflected forms from being affected. Recall that another feature of symmetrical versions of OO-correspondence and paradigm levelling is that these frameworks do not predict the priority of the base or cyclicity. I would argue that it is problematic that OO-correspondence frameworks require stipulative methods to enforce these principles.

With respect to interface constraints, I have outlined the concern above (which is shared by Anttila 2002 etc.) that when morphological information is allowed to be referred to by constraints (and by the same token, lexical information) we are at risk of providing almost the same level of over-powerful freedom that was

objected to in SPE. It would be possible, for example, to have a constraint requiring an onset in a particular word form. In addition to these interface constraint concerns, the innovative study by Albright (2008) shows that there may be psycholinguistic evidence pointing to the fact that morphologically-based sub-grammars are a global phenomenon within a language, lending some weight to the argument that cophologies (and to an extent also stratal models, which represent a globally divided grammar) are a better representation of morphophonological grammars. On the basis of these points, I will use a version of Stratal OT which does not refer to morphological information at the level of constraint, but that accepts sub-grammars and retains the predictions that there is priority of the base.

In terms of variation, I will use Stochastic OT (Boersma 1997), in conjunction with Stratal OT (as seen in Bermúdez-Otero 2005), as modeled in a simplified form in 4.10.5. In the analyses, the Stratal Stochastic OT that I will adopt will be somewhat simplified, in that I will not explicitly include the numerical element in the ranking scale, instead illustrating the overlap as done in figure (4.44). The numerical information can be assumed to reflect the variation found in the data tables, but will not be made explicit. In the analysis sections, we will see that in addition to the variation within dialects, the inter-dialectal variation is also of interest. What we will see, similarly to the *æ*-tensing examples discussed earlier in this chapter, is that each dialect presents evidence of the same pressures behaving in different ways with respect to the same phonological processes. In terms of N-HVD, we will see that both *Li.* and EWS do not show evidence of the process being synchronically active, but the exact nature of its demise is distinct.



## **CHAPTER 5**

### **The Early West Saxon and Northumbrian data and methodology**

#### **5.1. INTRODUCTION**

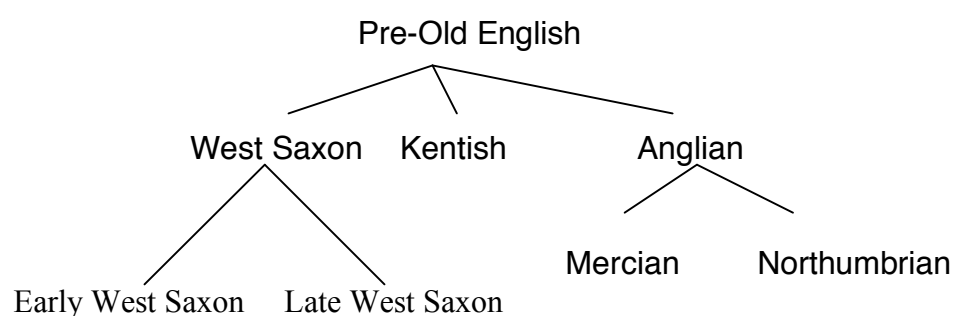
This study attempts to provide an analysis of the grammars within certain texts, with the assumption that, as far as possible, the texts represent the grammar of the author or scribe. This point, though, is not without controversy, and in this section I discuss the extent to which this ambition can be fulfilled. Additionally, inter-speaker variation is to be accounted for, and as such, distinct dialects have been selected, namely Northumbrian and West Saxon. Northumbrian and The Early West Saxon data cannot be taken, of course, to represent only geographical variants, since the Lindisfarne Gospel gloss is a late 10<sup>th</sup> Century text, while the Early West Saxon data are dated from the 9th Century. In the subsequent sections, I argue that it is indeed possible to propose a phonological analysis of the language of a text or a set of texts, but that this must be done with certain caveats. In the next section, for example, I discuss the potential problems with attempting to claim geographical or clear diachronic relationships between texts. In addition to the discussion of Old English Dialectology and some of the problems faced by historical sociolinguists, this chapter provides the essential background information about the data. This includes information about the date and provenance of the original manuscripts, for which Ker (1957) has been consulted. I also note in this chapter any important controversies regarding the manuscripts.

#### **5.2. OLD ENGLISH DIALECTOLOGY**

In this study, to represent the Northumbrian dialect I have examined the Lindisfarne Gospels (the English gloss having being added between 883 and 995) (London, British Library, MS Cotton Nero D.iv, Ker (1957: no. 165). For West Saxon, data have been extracted from a set of Early West Saxon texts. The texts used are the Parker Chronicle (dated up to 924) (Campbell 1959: §16), Alfred's translation of Gregory's *Cura Pastoralis* in the Hatton and Cotton manuscripts, which are dated as

late 9<sup>th</sup> C and the Lauderdale MS of Orosius, also late 9<sup>th</sup>/early 10<sup>th</sup> C. The linguistic analysis in Part 2 of the thesis focusses not only upon the synchronic phonological grammar of a single text, but also a dialectal (and where appropriate, a diachronic) comparison. The texts chosen represent various dialects within Old English, the traditional distribution of which is represented in the following diagram:

### *(5.1) Old English dialects*



(Simplified from Hogg 1988: 185. Also presented in Scott 2005)

However, the idea of Old English dialects representing geographical and/or diachronic varieties in the same way as might be assumed for later varieties such as Middle English is controversial, and has been the subject of much debate (e.g. Hogg 1988, Toon 1992, Hogg 1998, Hogg 2004). There are many problems with such a division. Firstly, as noted in Hogg (1988), it implies that Wessex, Mercia, Northumbria etc. are autonomous nation states with definable boundaries, when it is instead the case that they are most likely to be poorly defined centers with highly fluctuating strength and influence. Also noted in Toon (1992: 415) is the fact that the degree of influence of the kingdoms upon each other also varied over the years, which would be expected to have an effect upon the dialectal boundaries. Another problem with the diagram is that it implies that the dialects all developed from one earlier dialect of OE; the reality is of course likely to be more complex, since the language was brought to the British Isles by a number of North Germanic tribes.

Hogg (1988) goes into some detail about the methodological problems with Old English dialectology. Old English dialectology is approached from a different

angle from modern language dialectology. This is partly due to necessity, as the limited number of texts eliminates the possibility of taking into account issues such as gender and social class. It is also partly due to the philological reconstruction tradition, in which dialects and languages are traced to a common ancestor according to the *stammbaum* ‘family tree’ framework, dividing the dialects according to their similarities and differences. This method is unequipped to account for cases of dialect merging. One methodological problem with the *stammbaum* method that is highlighted by Hogg (1988: 187, 2006: §16.2) is that texts are assigned to one dialect or another on the basis of a limited set of isoglosses, for example in the case of the two parts of the Rushworth Gospels. Although they were likely both written at *Harawuda* (Hogg 1988: 186), they are assigned as ‘South Northumbrian’ and ‘North Mercian’, mostly due to the lack of peculiar features of Northumbrian in *Ru*<sup>1</sup>.

Campbell (1959: §256) expresses his rejection of the Old English dialect labels as having any real geographical significance, stating, for example that Northumbrian is merely the agreement between the Lindisfarne Gospels, Durham Ritual, Rushworth Gospels (2) and early names and fragments. We cannot, therefore, assume that the language found, for example, in the above texts actually represents the speech of the region of England north of the Humber. This is partly due to the fact that the only language that is represented in these texts is that of a very limited literate social group, though as Hogg (1988: 188) points out, the study of Old English dialectology has rarely taken into consideration any of the political and social divisions. Fortunately though, these issues are in no way fatal to the present study. Hogg suggests that it is necessary to an extent to take the collections of texts to be separate entities, noting that although ‘no text is an island’, we cannot hope to be able to locate them on a map in a meaningful way. In terms of this study, such an approach is unproblematic, since it is my intention to reveal how language change has developed within different varieties of the same language. This aim is partly with a view to asking the question: a) If morphologisation and/or rule death occurs due to opacity, and b) if two dialects share the conditions that lead to opacity, c) can we expect to see morphologisation in both dialects? We can of course not expect to answer (c) with much predictive power, but I argue that the answer to it does shine some light onto the nature of phonological developments. The answering of such

questions does not rely upon strong diachronic or geographical connections between the texts. Of course, the problem of Old English dialectology goes beyond the question of whether the diagram in (5.1) is a realistic way of defining the dialect ‘boundaries’ in Anglo Saxon England. Additionally, the notion of texts as informants, as assumed in Toon (1983), has been criticised in Trousdale (2005: 65), since as noted by Fleischman (2000: 46) the language contained in the text may have been filtered through one or more textual copies. We also have the issue, in certain cases such as in the Parker Chronicle, of numerous scribes. Such information regarding the copying process, where applicable, and information regarding the scribes is provided in sections 5.4 below.

With regard to West Saxon, I follow Hogg (1988) in referring to the traditional ‘early’ West Saxon using capitalisation, to highlight the fact that the differences between the Early and Late periods cannot be attributed entirely to the chronology. Instead, many of the differences are due to the status of Ælfrician West Saxon as a *schriftsprache*. It therefore does not qualify as a standard dialect according to the criteria laid out by Haugen (1966), since it was not accepted throughout the country as a language, or extended beyond literary and religious contexts. Ælfric’s language is rather a focused language of religion with a small amount of internal variation (Hogg 2006: §16.3). Ælfrician West Saxon is not the focus of the investigation here, though I at times refer to its behaviour as described in other work. Throughout this thesis, I refer to the language of the Lindisfarne Gospels as Late Northumbrian, but without making strong claims that it actually represents the language of Northumbria outside of a limited literate social group. Fortunately for the study of phonological change in OE, Hogg acknowledges the reliability of the Anglo Saxon scribes in representing phonology.

### 5.3. METHODOLOGY

The data for the linguistic analysis have been extracted from Cook’s Glossary in the case of Lindisfarne, and Cosijn’s *Altwestsächsische Grammatik* in the case of the Early West Saxon data. Where Cosijn does not give the full lists, and signifies this with ‘etc.’ I have provided counts based in searches from *The Dictionary of Old*

*English corpus in electronic form* (Healey et al 1998). In such instances, I have provided totals, but have not provided the references for every form. The data lists can be found in appendixes A, B and C. Appendix (A1) contains the counts for the 2<sup>nd</sup>/3<sup>rd</sup> sg.pres.ind. in EWS, and (A2) in Lindisfarne. Appendix (B1) contains the lists for the weak preterite in EWS, and (B2) the weak preterite in Lindisfarne. Appendix C contains the strong and weak past participles for EWS (C1) and for Lindisfarne (C2). Appendix D includes a list of adjectives ending in *-ig* in Lindisfarne. Within the data lists, macrons are supplied on the entry forms. Where forms have been of particular interest, they have been checked in either the corpus or in the printed edition.

The data counts have been provided in tables throughout Chapters 6–8, and *chi square* tests have been used to calculate statistical significance. Lowry's (2010) online resource has been used for the chi square calculations, and the Pearson Chi-Square value and *P* value has been provided in each case.

#### 5.4. EDITIONS USED IN THIS STUDY

I will now move onto the issues that arise when using written texts as a data set for the examination of sound change. The printed editions that have been used in the corpus have been consulted in order to provide information about the way in which each edition has been compiled. This includes the number of manuscripts that exist, and which have been used by the editor, and also their policy regarding editorial corrections. The manuscript choice of the editors is of consequence for this linguistic study, as it is important that the manuscripts relied upon are those which most accurately represent of the language in use within a limited time span and localised scriptoria.

It is useful here to consider the relation between orthography and phonology. Ross (1937: 26) explores some of the issues regarding variation in a manuscript and its connection to phonology in relation to the Lindisfarne Gospel gloss. He suggests a number of reasons that might explain variations in inflectional endings, which I repeat here in brief:



1. Phonological change.

2. Scribal confusion, which may follow from (1) in some cases. For example, in cases where the vowels of endings may be reduced phonologically, the scribe may not perceive any difference between them.

2. The variation may be due to the forms representing two or more primitive Germanic forms.

3. Dialectal merging, which may follow from the scribe being from a different location from the scriptorium, or from influence from exemplars composed in a different dialect.

4. A sound might exist in the scribe's spoken language that cannot be clearly represented by a single grapheme. Therefore two or more graphemes which are closest to the sound may be used variably.

Among these causes of variation, it is reason (1) that is of most interest in this study, and cases that can reasonably assumed to be sound changes are examined in the later analyses. However, the other four possibilities are also of interest. It is necessary therefore to be careful when analysing cases of possible sound change involving graphemes that are commonly in variation with each other, such as *o* and *a* (Ross 1937: 28 fn. 26). This problem can be eliminated to an extent by examining the degree of variation of the sounds in question in environments that would not give rise to the anticipated sound change, for example, in roots, rather than in inflectional endings. The potential for cases of dialectal merging must also be kept in mind, as the reliability of the phonological analysis could be compromised by data which instead of revealing cases of phonological change motivated by internal factors, reveals the influence of a neighboring dialect, i.e. exogenous change. The choice of the texts will help to guard against this potential problem. The most reliable texts are those for which we can be as sure as possible of the provenance of the manuscripts and the scribes. I will now discuss these issues in relation to the chosen texts.

## 5.5. THE TEXTS UNDER INVESTIGATION

### 5.5.1. *The Lindisfarne Gospel Gloss*. London, British Library, MS Cotton Nero D.iv, Ker (1957: no. 165)

To gain insight into the language of Northumbrian Old English, I have examined the OE gloss to the Lindisfarne Gospels: London, British Library, MS Cotton Nero D.iv, Ker (1957: no. 165). I relied upon Skeat's (1871-87) edition, which is that found in the *Dictionary of Old English in Electronic form* (Healey et al). The data were collected from Cook's (1894) glossary. Following Mitchell, Ball and Cameron (1975), I refer to the Lindisfarne gospel gloss as *Li*, with the four gospels being referred to as follows: *Mt(Li)* for the version of Matthew's gospel found in the Lindisfarne manuscript, *Mk(Li)* for Mark's gospel, *Lk(Li)* for Luke's and *Jn(Li)* for John's.

The Latin text was written by Eadfrið, bishop of Lindisfarne (698–721), and glossed in Old English by 'Aldred presbyter'. This is revealed in an inscription which is in the same hand as the gloss. According to Ker (1957: 165) the gloss was likely to have been added at Chester-le-Street, the home of the congregation of St. Cuthbert between 883 and 995. We cannot be sure exactly where the scribe comes from, nor that he was not copying from an earlier source. Therefore, following Hogg (1988) it seems most sensible to assume that the language contained within a text represents a mix to some extent. As we will see in later sections, despite the variation within the Lindisfarne Gospels, linguistic developments that are distinct from the EWS data set can clearly be seen.

The Lindisfarne Gospels gloss differs from a translation in that rather than being a grammatically complete alternative to the original Latin text, it is glossed by the insertion of Old English words above the Latin originals. Due to this method of glossing, the Old English text often has a rather unnatural word order (Ross 1933: 111). It is also common to find abnormal word forms, due to the dependence on the Latin original. An example of this is the artificial use of prefixes (Ross 1933: 112). However, this dependence upon the Latin text does not pose a problem for the reliability of the forms in terms of inflectional morphophonology.

Interestingly, especially for the morphophonology, the scribe of the Lindisfarne gloss employs methods of representing variant forms (Ross 1930–7: 6). A letter is sometimes placed directly above, or next to a letterform. For example, directly over the *e* in *lytle* ‘little’ there is an *o*. This represents that the final *e/o* is variable, and is not a correction.

The text for the Lindisfarne Gospels found in the corpus (Healey et al 1998) is that by Skeat (ed.) (1871–87): *The holy gospels in Anglo-Saxon, Northumbrian, and Old Mercian versions*. This is also the edition used by Cook (1894) in his glossary. It is from the glossary that the data have been extracted. The Skeat (1871–87) edition has been consulted where forms are of particular interest in terms of the morphophonology, and also in order to determine which lexeme is present in cases of ambiguity. The original Latin is supplied in the edition. Cook indicates stress and vowel length in his entries, and these have been used, but have been supplemented by consultation of Bosworth and Toller (1898, 1921). Also, Cook indicates abbreviations with the use of apostrophes and macrons. Therefore, a form such as *u*, in the dative would be used to signify an abbreviation from *-um*, rather than phonological deletion. Skeat (1871–87) clearly states his editorial aims in the preface to Matthew’s gospel. This edition attempts to ‘represent the peculiarities of the MSS. in the most exact and accurate manner’. Crucially, Skeat (1871–87: viii) states that it is the duty of an editor not to make any corrections without giving due notice. An edition compiled along these lines is a reliable choice for the purpose of a linguistic investigation. Skeat (1871–87) preserves features such as the capitalisation, accents, punctuation and spelling that are found in the manuscripts.

## 5.6. EARLY WEST SAXON

### 5.6.1. *Cura Pastoralis* (Ker 1957 nos. 324, 195)

Alfred’s translation of Gregory’s *Regula Pastoralis*, with Alfred’s preface is dated between 890 and 897, representing an Early West Saxon variety. It is in two Manuscripts: Oxford, Bodleian Library, MS Hatton 20 (4113), Ker (1957: no.324), AD 890–897; and London, British Library, MS Cotton Tiberius B.xi, Ker (1957:

no.195), AD 890–897. Cosijn’s (1888) data include tokens drawn from both the Hatton and Cotton manuscripts, and in this study these are cited showing both *H* and *C* if a form is found in both manuscripts, with the reference referring to the Hatton, or just a single *H* or *C* when a form is found only in one manuscript: CP (*H*, *C*), CP (*H*), CP (*C*).

*5.6.1.1. Oxford, Bodleian Library, MS Hatton 20 (4113), Ker (1957: no.324)*

The Hatton manuscript contains an inscription: ‘ÐEOS BOC SCEAL TO WIOGOR CEASTRE’, which indicates that this is the copy that was mentioned in the Cotton manuscript as having been sent to Werfrith at Worcester by order of King Alfred. Like the Cotton manuscript, it can be dated between 890 and 897 (Ker 1957: no. 324). This manuscript is in two hands, one of which is the main.

*5.6.1.2. London, British Library, MS Cotton Tiberius B.xi, Ker (1957: no.195)*

The Cotton manuscript was damaged in the fire of 1731 and was virtually completely destroyed in a later fire in 1864. A copy of the manuscript was made by Junius (Bodleian MS. Junius 53) which is printed in the Sweet (1871–2) edition, from which the Cosijn (1888) data in used this study were compiled. Where the Cotton manuscript was lacking, readings from the Hatton manuscript were used. The accuracy of the Junius copy has been verified by comparing the parts which are copied from Hatton to the original Hatton manuscript (Sweet 1871–2: xix). The Cotton manuscript is assumed to be of a similar date to Hatton. Evidence for this comes in the form of a note: ‘+Plegmunde arcebis. is agifen bis boc. 7 Swiðulfe bisc 7 Werferðe bisc’. This inscription is on the first leaf of the manuscript, providing evidence that the copy was ordered by Alfred, and is hence of a similar date to the version sent to Werfith (the Hatton MS.), as it precedes the sending of the other manuscripts to their destinations (Sweet 1871–2). There are two hands, one appearing in the preface, and the other in the table of chapters and main text (Ker 1957: no. 195). According to Sweet (1871–2: xvii) the style of the handwriting

agreed closely with that of the Parker Chronicle, adding to the evidence that the *Cura Pastoralis* is an accurate representation of Alfred's language.

The Sweet (1871–2) edition, which is used in this study, is the edition used both by Cosijn (1888) and the corpus (Healey et al 1998). This edition contains both the Hatton and Cotton (as found in the Junius copy) texts, complete with notes. Sweet (1871–2: viii) makes clear that he intends to represent the original manuscript as closely as possible in the text, and as such, contemporary additions are shown above the line and enclosed in parenthesis. Alfred's preface in the Hatton manuscript has many erasures and alterations, which have where possible been restored to the original in the Sweet edition. Late additions are rejected completely by Sweet. The principle adopted by Sweet in compiling the edition is very beneficial for this study, since it ensures that the language is consistent in date and provenance as far as possible.

#### 5.6.2. *Orosius*

*The Lauderdale manuscript:* British Museum, Additional 47967 (Ker 1957: no. 133)

*The Cotton manuscript:* British Museum, Cotton Tiberius B. i (Ker 1957: no. 191)

The Old English translation of the Orosius is dated from the late ninth to early tenth century, and is from the scriptorium in Winchester.

There are two manuscripts, the Cotton and the Lauderdale, and two fragments (Ker 1957: nos. 323, 391). The majority of forms used in this study are from the Lauderdale manuscript, as, like the *Cura Pastoralis*, the Cotton manuscript was damaged in the fire in the Cottonian library of 1731. According to Ker (1957: no. 133), the Lauderdale manuscript of Orosius is likely to be in one hand, which is contemporary with and from the same scriptorium as the hand of the annals for 892–924 in the Parker Chronicle.

The data have been taken from Cosijn's (1888) *Altwestsächsische Grammatik*, which contains references taken from the Sweet (1883) edition. Sweet's

edition contains readings from the Lauderdale manuscript, and also divergent readings of the Cotton manuscript. Sweet marks readings from the Cotton in curved brackets, and marked additions to the Lauderdale using square brackets.

*5.6.3. The Parker Chronicle and Laws. Cambridge, Corpus Christi College 173, ff. 1–56 (Ker 1957: no. 39)*

The Parker manuscript dates from 891 to 924, and is the oldest manuscript of the Anglo-Saxon chronicle and laws. It is written at intervals throughout the tenth century, with less frequent additions made from 1001–1070 (Ker 1957: 39). It is from the same scriptorium at Winchester as Orosius, with the possible exception of the very earliest part of art. 1 (quires 1–3). The Parker Chronicle is in one single manuscript, with five main hands up to the year 1001. There are many additions and alterations to the manuscript, which were made partly at Winchester, but mostly at Canterbury. These additions may therefore be subject to dialectal influence from Kentish. Following Mitchell, Ball and Cameron (1975) I refer to data from the Parker Chronicle using the short title *Chron.* followed by the number of the year entry, e.g. *Chron.773*. The edition that appears in Cosijn (1888) is also used in the corpus (Healey et al 1998) is by Earle & Plummer (1892–99). This edition also includes a glossary, which supplies all the words that appear in the manuscript, in all forms in which they appear, as well as additions to the manuscript. Where additions are early and in good hands, the Earle & Plummer (1892–99) edition retains them, but using a smaller typeface. When such additions are in late hands (for example, from the late 11th century and onwards) the additions are printed in small italics. In this edition, letters or words that have been added are supplied in brackets. Contractions are expanded, and this is indicated in the text using italics.

## 5.7. CHAPTER SUMMARY

The significance of the two dialects under investigation has been discussed in this chapter, along with the problems of Old English dialectology and the issues involved when using printed editions and glossaries in data collection. The two data sets

selected differ in terms of their dates and provenance, and thus, they are not taken to represent simple stages along a diachronic or geographical continuum. However, both varieties share the property of being fairly varied, and not subject to the same degree of regularity as, for example, *Ælfric*.<sup>22</sup> Of course, *Lindisfarne* and the EWS texts also represent the language of a highly limited literate religious group. What is interesting, we will see in later chapters, is that the variation between these dialects is enlightening when it comes to phonological change. Though there are many differences, we will see that some of these differences are the results of the same pressures, affecting the behaviour of N-HVD and HVD in different ways.

---

<sup>22</sup> This is not to suggest that *Ælfric* is a 'standard' language, since it did not spread throughout the speech community. It cannot be said that speakers in Wessex would necessarily exhibit the same linguistic features of *Ælfric*.

PART 2:  
RESULTS, ANALYSIS AND IMPLICATIONS





## CHAPTER 6

### The indicative present verbs: high vowel deletion

#### 6.1. HIGH VOWEL DELETION IN THE STRONG VERBS

In this section I will begin the data and analysis section of the thesis with the strong and weak present indicative verbs. In terms of apocope, the 1<sup>st</sup> sg.pres.ind., ending -*u/-o* in non-West Saxon is of interest, as high vowel deletion is expected to remove the inflexion after one heavy or two light syllables. As far as West Saxon is concerned, it is not expected that there will be any interesting behaviour going on regarding apocope, as the high vowel suffix is not present. Instead, 1<sup>st</sup> sg.pres.ind. forms end in -*e*, and reject syncope. The data have been examined to verify this.

As far as syncope is concerned, it is, as outlined in Chapter 2, the 2<sup>nd</sup> and 3<sup>rd</sup> sg.pres.ind. in -*est* and -*ep* that is expected to syncope after heavy syllables, in accordance with the traditional descriptions of high vowel deletion. The 2<sup>nd</sup> and 3<sup>rd</sup> sg.pres.ind. endings are derived from Gmc -*isi*, -*ipi* (Campbell 1959: §732), and contain therefore a historically light and high vowel. It must be noted also that if syncope does apply ‘as normal’ in verbs, it proceeds to remove a vowel in a closed syllable. This, in other word classes, including adjectives, nouns, past participles and weak preterite verbs, would constitute overapplication. This is due to the fact that the original phonological conditions for HVD require that an unstressed vowel in a light closed syllable is deleted when it follows either a heavy syllable or two light ones; i.e., unfooted light syllables are removed. In a 3<sup>rd</sup> sg.pres.ind. form such as *singeþ*, the vowel, although it is in an unfooted syllable, is not light, since it is closed by the final inflexional *þ*: [ω[.sin.].geð.].

According to Wright & Wright, “In the second and third pers. sing, the -i- (-e-) was regularly syncopeated after long stems, as *hilpst*, *hilpð*, *ritst*, *rit(t)*, *tiehst*, *tiehð*, &c., and remained after short stems, as *birest*, *bireð*, *fserest*, *faereð*” (Wright & Wright 1925: §476). This statement clearly is based on the assumption that syncope was an active weight sensitive process in the indicative present verbs. However, Wright & Wright go on to elaborate on the situation found in the texts, noting that “there are many exceptions to this rule, especially in WS. and Ken.,

owing to new formations in both directions, as *bindest*, *bindeð*, *hilpest*, *hilpeð*, &c., and on the other hand *birst*, *birð*, *faerst*, *faerð*...” (Wright & Wright 1925: §476). They go on to note that in Anglian, syncope is almost totally absent, and that in West Saxon syncope is ‘practically general’, implying great levels of overapplication. Recall Campbell’s claim (1959: §751), discussed in Chapter 2, that in West Saxon, the Weak verbs are more likely to show underapplication of syncope in the 2<sup>nd</sup> and 3<sup>rd</sup> sg.pres.ind. in West Saxon than the strong, and also that Class 1 weak *nerian* types almost never undergo syncope. Additionally, Campbell (1959) notes a preventative effect of sonorous consonants on deletion.

These handbook descriptions indicate that high vowel deletion in the indicative verbs is highly opaque. The mention of sonority of consonants, a weak-strong discrepancy, as well as high levels of overapplication and underapplication leads one to assume that syncope is not at all ‘healthy’ or robust, and that morphologisation and phonologisation are likely to be setting in. Any such phenomena will also be discussed in Chapter 9 against the backdrop of other departures in the behaviour of syncope. It will be shown, for example, that further distinctions exist between, for example, the strong and weak past participles, and the preterites and the presents.

The first task is to ascertain whether syncope and apocope are active in any sense in the indicative verbs is whether they are weight sensitive. After the levels of weight sensitivity have been revealed, further morphophonological complexities will be examined.

## 6.2. THE EARLY WEST SAXON STRONG VERBS

### 6.2.1. Apocope (1<sup>st</sup> sg.pres.ind.)

The 1<sup>st</sup> sg.pres.ind., according to Campbell (1959) ends in *-e* with only one exception *cweðo ic*. The 1<sup>st</sup> sg.pres.ind. tokens have not been collected at this stage, since Cosijn’s word lists when checked showed consistent *-e* endings without apocope.

### 6.2.2. Syncope

Whether syncope is prosodically expected or not, the strong Early West Saxon verbs show variation of syncope. Syncopated forms are more common, even in the ‘non-syncopating’ classes. However, even in the syncopating classes, there are cases of syncope failure. The variation is present within the same stems also, e.g. *astigeð* vs. *oferstigð*.

The classes of verbs that are prone to syncope are those with a heavy monosyllabic stem, which includes the strong classes with long stem vowels; I, II, VII and also Class III, which has a heavy consonant cluster. The classes of verbs that are not expected to undergo syncope are those with short stem vowels, including Classes IV, V and VI.

### 6.2.3. Assessing the extent to which syncope is weight-driven in West Saxon verbs

The table below shows that there is little difference in the percentage failure rate of syncope in the verb classes which provide the weight conditions for syncope to apply and those which do not. Class VII has the highest percentage of unsyncopated forms, and falls within the traditionally ‘non-syncopating’ category. Does this provide evidence that weight considerations remain with respect to syncope? I would argue that it does not, as this is the one class with very few data tokens, as such, the percentage is misleading and should probably be discounted. Excluding this 25% value for Class VII, we can see that present indicative verbs from all classes show low rates of syncope failure, from 3–11%, with no significant ( $X^2= 1.42$ ,  $P= 0.233$ ) distinction between the heavy and light classes.

(6.1)

Strong Indicative 2 <sup>nd</sup> /3 <sup>rd</sup> sg.pres.ind. in EWS	Total	Syncope	Percentage syncopated
Heavy Classes I, II, III, VII	371	346	93%
Light Classes IV, V, VI	397	361	91%

Given these statistics, we can conclude that syncope in the indicative strong verbs of Early West Saxon is not weight conditioned.

### 6.3. EARLY WEST SAXON WEAK VERBS

I now return to the observation in Campbell (1959), that syncope is more likely to fail in the weak West Saxon verbs than the strong ones. Campbell does not imply that syncope is more likely to fulfil its weight obligations in the weak verbs, but refers to syncope failure. Table (6.2) provides the results for the weak 2<sup>nd</sup>/3<sup>rd</sup> sg.pres.ind, including both heavy and light stems. As Campbell also refers to the lower rates of syncope in highly sonorous environments, the heavy data for forms ending in a sonorant have been set apart, as have the data for dental forms, which may be expected to show higher syncope rates:

#### (6.2) *Syncope in the weak present EWS forms*

(a)

Short stems in EWS: Weak	Total	Syncopated	% syncopated
2 <sup>nd</sup> /3 <sup>rd</sup> sg.pres.ind.	90	8 7 of the 8 forms are dental, e.g. <i>settan</i> , <i>lettan</i> . <i>cnysð</i> is the only unexpected form	9% (majority are dental and no dental forms were left unsyncopated)

(b)

Heavy stems in EWS: Weak 2 <sup>nd</sup> /3 <sup>rd</sup> sg.pres.ind.	Total	Syncopated	% syncopated
Heavy forms excl. dentals and sonorants	58	52	90%
Ending in a sonorant	143	116 (the 3 obs+son forms were all unsyncopated)	81%
Ending in a dental	124	120	97%
<i>All heavy forms</i>	325	288	87%

These results are highly interesting. In contrast to the behaviour of the same verb number and person inflexions within the strong classes, there is a robust weight condition in the weak ( $X^2 = 219.05$ ,  $P = <.0001$ ). The strong verbs show such high levels of overapplication in the light stems of the present tense that light forms are little more likely to undergo syncope than heavy ones. As indicated in the handbooks, there is indeed a tendency for sonorous forms to exhibit slightly lower rates of syncope, and for dental forms to almost always be syncopated, whether light or heavy. Although Campbell (1959: §751) states that weak verbs are more likely to have unsyncopated forms, which is indeed the case, it is arguably more accurate to state that weak 2<sup>nd</sup>/3<sup>rd</sup> ind.sg. forms display the effects of weight-based high vowel deletion, while the strong 2<sup>nd</sup>/3<sup>rd</sup> ind.sg. forms do not.

#### 6.4. INDICATIVE PRESENT VERBS IN LINDISFARNE

In reference to the Northumbrian 2<sup>nd</sup>/3<sup>rd</sup> sg.ind. behaviour, Campbell (1959: §733a) comments that there is ‘practically never syncope’ in the strong verbs. As for the weak verbs in Lindisfarne, Campbell does not say much regarding syncope other than that Anglian texts display syncope ‘rarely’. As with the last section, the intention here will be to ascertain whether the data counts for Lindisfarne reveal a)

any weight conditioning in the strong or weak 2<sup>nd</sup>/3<sup>rd</sup> sg.pres.ind. and b) any other phonological conditioning influencing the placement of syncope.

Regarding apocope, Campbell (1959: §731.fn1) states only that although the final *-u/-o* should remain only after light syllables, is also appears ‘analogically’ after long ones in Lindisfarne.

#### 6.4.1. Data from the strong indicative verbs in Lindisfarne

Tables (6.3a–b) show that in the strong Lindisfarne forms syncope is totally inactive, with light and heavy forms failing to show even 1% deletion rates.

(6.3)

(a)

Light strong forms <i>Li.</i>	syncopated	total	% syncopated
2 <sup>nd</sup> /3 <sup>rd</sup> sg.pres.ind.	1	269	0.4%

(b)

Heavy strong forms <i>Li.</i>	syncopated	total	% syncopated
2 <sup>nd</sup> /3 <sup>rd</sup> sg.pres.ind.	1 <i>hæt</i> (pret. 3 sg.?) <i>Li.Mk. I 3, 20</i>	239 (72 with <i>-a-</i> )	0.4%

This contrasts West Saxon, in that strong West Saxon forms show some subtle levels of phonological conditioning that influences whether or not syncope occurs. However, what Lindisfarne and Early West Saxon have in common is that *weight based* syncope is totally inactive in the strong indicative present verbs.

#### 6.4.2. Apocope in the strong indicative Lindisfarne verbs

As with the situation for syncope, apocope shows no weight conditioning in the strong indicative present verbs of Lindisfarne. Tables (6.4a–b) show the deletion rates after heavy and light stems:

(6.4)

(a)

Light strong forms	apocopated	total	% apocopated
1 <sup>st</sup> sg.pres.ind.	4 (+ 2 uncounted with abbrev. marks)	172 (-o in unapocopated forms)	2%

(b)

Heavy strong forms	apocopated	total	% apocopated
1 <sup>st</sup> sg.pres.ind.	2	56	4%

In sum, the strong present indicative verbs have shown no weight conditioning for both forms of high vowel deletion, in both Lindisfarne and Early West Saxon. Syncope applies almost across the board in West Saxon, though with minor levels of phonological conditioning, and almost always fails in Lindisfarne. Apocope is not relevant to Early West Saxon due to the non-apocoping *-e* suffix in the 1<sup>st</sup> sg.pres.ind., and in Lindisfarne, it fails to a similar degree to syncope.

#### 6.5. THE WEAK PRESENT INDICATIVE VERBS IN LINDISFARNE

As we shall see here, the data for the weak present indicative verbs do not reveal anything beyond that which is stated in the handbooks. Tables (6.5) and (6.6) show that there is no weight conditioning, and so few tokens of deletion in both the heavy and the light forms that there is no evidence to suggest any further or additional phonological conditioning.



## (6.5)

Syncope: 2 <sup>nd</sup> /3 <sup>rd</sup> sg.pres.in d. Class 1 weak		syncopated	total
Light	non- dental forms	0	27
	dental forms	1 <i>asette</i> (final v)	22
Heavy	obs+son forms	0 epenthesis, 0 syncope, but x1 gefregne (looks like final consonant dropped)	21
	Dental forms	1 <i>aspeaft</i>	69 (x17 were in -a-)
	Sonorant forms	1	149 (-a x26, -æ- x2)
	‘standard’ heavy Class 1 weak	0 (x36 -a)	116

## (6.6)

Apocope 1 <sup>st</sup> sg.pres.in d.		apocopated	total
Light	Class 1 weak excl. dental forms	0	5
	Class 1 weak dental forms	1? superscript u	14
Heavy	Class 1 weak obs+son	0 (0 with stem epenthesis)	4
	Class 1 weak dental forms	0	18
	Class 1 weak sonorant forms	0	34
	‘standard’ heavy Class 1 weak	1	14 (+ x1 -e, rest -o)

It is within the weak present indicative verbs that the behaviour of Lindisfarne departs most significantly from Early West Saxon, showing no active syncope. Whether strong or weak, Lindisfarne shows syncope to be inactive in the present indicative forms.

#### 6.6. SUMMARY OF THE PRESENT INDICATIVE VERBS

The present indicative verbs in both dialects have not been shown to show high levels of syncope, and apocope is almost non-existent. The EWS weak Class 1 verbs, however, are surprisingly weight conditioned. In both *Li.* and EWS, syncope has ceased to be active in the strong present indicative verbs, and in Lindisfarne there is no activity in the present indicative. West Saxon, therefore, has presented an interesting morphological condition: syncope proceeds in strong forms which do not fulfil the weight conditions for deletion, i.e. there is no unfooted syllable to correct. Rather than synchronic overapplication, it is also possible that reanalysis has taken place in the strong present forms, with the 2<sup>nd</sup>/3<sup>rd</sup> sg.pres.ind. suffix being reanalysed as underlyingly vowelless. In contrast, the weak forms show no such reanalysis, and the weight conditioning evident within the 1<sup>st</sup> class weak declension shows that unfooted syllables are still corrected within West Saxon verbs.

Having revealed the data for Lindisfarne and Early West Saxon, it appears to be the case that high vowel deletion is largely inactive in the verbs, with the exception just discussed. However, the following chapters will show that the situation in the verbs is extremely complex, and that HVD is in fact highly active within other parts of the verb paradigm. This is one of the overarching issues that must be dealt with when forming an analysis. How and why does a phonological process come to be active in some parts of a morphological paradigm and not others?



## CHAPTER 7

### Syncope in Weak Verb Preterites

#### 7.1. INTRODUCTION

The Old English weak verbs provide a highly interesting data set for the study of high vowel deletion, and have recently been the subject of a study in which it is argued that in the West Saxon weak verbs the total demise of the weight conditions is evident (Minkova 2012). In this chapter I provide the data for the EWS weak preterites in Section 7.2, and in Section 7.3 I provide the results from *Li*. I then discuss the implications of the data results for high vowel deletion, and propose an analysis within OT. I will focus primarily upon the weak preterite of Class 1, but will also provide insights, where relevant, into the behaviour of Class 2. If high vowel deletion is applying in a weight-based manner in Old English weak verbs, the first thing that we would expect to see in Class 1 is the absence of syncope in the light stems. The weak Class 1 forms, when inflected for the preterite, generate an inflectional vowel *-e-*, historically high *-i-* (Lass 1994: 165), which, if preceded by a ‘heavy’ syllable, undergoes syncope. As laid out in Chapter 2, I follow Hogg (2000) and Bermúdez-Otero (2005) in assuming that high vowel deletion is a process targeting unfooted syllables. Therefore, the inflectional *-e-* is assumed to undergo deletion due to its position in an unparsable syllable within the prosodic word e.g. *hīeran*, *hīerde*: [ω[.hi:e.].re.de.]. However, a light root, such as *ner+ede* does not present these conditions, and as such forms such as *\*nerde* are expected to be absent. In contrast, Class 2 is not expected to undergo syncope, as the historically long thematic *-o-* is protected from deletion, for synchronic reasons that will be explained in Section 7.6.3. As Class 2 is highly uniform in Early West Saxon, the full data counts are not given, though they have been checked in Cosijn (1888: §129). I assume therefore in my analysis that syncope does not affect Class 2 in Early West Saxon. On the other hand, in Lindisfarne there is a lower degree of uniformity, and as such, the weak Class 2 data have been included in Appendix B.

## 7.2. WEAK VERBS IN EARLY WEST SAXON

In this section I will focus upon the weak Class 1 preterites, as these are the forms that present the richest alternations. The data in this section have been extracted from Cosijn (1888), and are organised according to weight, root-final consonants and root-final consonant clusters. These are all factors which are known to affect the behaviour of HVD (see Campbell 1959, Bermúdez-Otero 2005, Minkova 2012 etc.). The following data tables are therefore intended to reveal whether there is evidence of weight conditioning in the weak preterites, and also the nature of any additional phonological conditioning. Where relevant, statistical significance has been calculated using Lowry's (2010) online resource. At the 0.05 level, significance is assumed when there is a chi square value of  $\geq 3.84$ . In all cases, the Pearson chi square and *P* values are provided.

### 7.2.1. *Historical details*

In contrast to the strong ablaut system, the weak preterite does not clearly represent a particular Indo-European ancestor, but appears instead to have arisen in Germanic (Lass 1994: 166). According to Lass (1994: 166) the most likely source was the compounding of a verbal noun with the verb. In Old English, the thematic vowels of certain weak forms give rise to complications, as the vowels may be targeted by syncope. In OE, the thematic/athematic distinction in Class 1 was determined by syllable weight in the root, as high vowel deletion removed high vowels after heavy syllables. This affects Class 1, in which the thematic vowel was light *-i-*, and therefore would face deletion after heavy syllables (Lass 1994: 165). This represents the traditional account of HVD in the weak preterites.

### 7.2.2. *Model paradigms*

The weak verb model paradigm was discussed in Section 2.2.4. I repeat here the paradigm for the Class 1 indicative preterite verbs, as found in Campbell (1959:

§748):

(7.1) *Weak Class 1 preterite paradigm*

	‘Light’ stem		‘heavy’ stem
	fremman	herian	hīeran
sg.			
1	fremede	herede	hīerde *hīerede
2	fremedest	heredest	hīerdest *hīeredest
3	fremede	herede	hīerde *hīerede
Pl.	fremedon	heredon	hīerdon *hīeredon

According to Lass, the original formation is visible in a small class of light stems in -*r*, including *nerian* ‘save’, *herian* ‘praise’ Go. *nasjan*, *harjan* (Lass 1994: 166), as WGG did not trigger doubling of /r/. This type of verb is usually formed from verbs or adjectives. This stem formative, -*e*- from earlier -*i*- (Lass 1994: 165) undergoes syncope after heavy syllables, which is shown above in *hīerde* \**hīerede*, but not after light syllables, as in *nerian* (*nerede*).

Recall from Section 2.2.4 that *fremman* types are assumed to be light. The status of geminates in terms of syllable weight is something worthy of consideration. The *fremman* types are not subject to syncope, since though they have a geminate in the infinitive through WGG: [ω[frem:] + an], they do not surface with a geminate throughout the paradigm, and do not provide evidence that the geminate is underlying. The behaviour of syncope may also be an indication of the underlying weight of the consonant in *fremman* and other geminate types, that is, if syncope is shown to be truly weight sensitive.<sup>23</sup> I assume, therefore, that non-*fremman* type geminates, found (at least variably) throughout the paradigm, yield a heavy syllable. The *fremman* types have therefore been classified alongside the light stems in the data tables. The following tables also detail the syncopation rates in weak verbs with a root-final consonant+sonorant cluster. It is expected that there will be some level of

<sup>23</sup> I will go on to argue that the data counts indicate that weight conditioning is in fact reasonably strong in the weak Class 1 preterites.

interaction with epenthesis in such cases, as alternations such as *timberde* ~ *timbrede* are attested in Lindisfarne. In certain cases, such as *timbr+ede*, phonotactics do not permit syncope to proceed without epenthesis: *\*timbrde* (see Minkova 2012: 207 for discussion). Later in this chapter I will discuss how this interaction can be accounted for. Another issue that is noted in Campbell (1959: §753), and that has been discussed in relation to the EWS data, is that certain originally light forms in West Saxon undergo syncope in spite of their weight, such as *hredde* *\*hredede* ‘save’. There appears to be the addition of phonological conditioning to of high vowel deletion, with syncope prioritising dental environments above weight conditions. Forms with a root-final dental have been treated separately in order to see to what extent this generalisation holds in Lindisfarne.

### 7.2.3. Class 1 weak forms: light

The first point that must be made here is that following Cosijn (1888) and Campbell (1959), I have included *fremman* types with the light stems. According to Cosijn (1888: §116), the weak preterite short forms of Class 1 do not undergo syncope. However, stems ending in a final *t* or *d* show overapplication of syncope, e.g. *gelettan*, *gelette* Or 72.27, *settan*, *sette* CP (H, C) 93.1, 261.14, etc.

### (7.2) Syncopation in EWS light stems

	Total	<i>Syncope</i>	Percentage syncopated:
Light stems, e.g. <i>fremman</i> , <i>cnyssan</i> , <i>nerian</i> etc.	43	0	0%
Light stems ending <i>t</i> or <i>d</i> ( <i>settan</i> )	12	12	100%

These numbers show that there is strong evidence to suggest that overapplication of syncope after dentals applies. In Early West Saxon, the deletion in the dental forms creates a geminate in every case in the light stems,<sup>24</sup> with assimilation to the stem final consonant taking place: *dd*, *tt*. These factors will be taken into consideration in the OT analysis later in this chapter (See also Minkova 2012).

#### *7.2.4. Class 1 weak forms: heavy*

In this section we will see whether the heavy forms show the ‘expected’ deletion. I have arranged the data in tables according to the final stem consonant. Table (7.3) contains all of the relevant forms, though certain root-final consonant types, including those ending in dentals, are given a closer examination in tables (7.5– 7.8)

---

<sup>24</sup> Geminates are not necessarily created in the heavy stems (see tables 7.16 and 7.17).



### (7.3) Syncopation in heavy stems

Heavy stem weak Class 1 forms. Data from Cosijn (1888: §120)	Total	Syncope	Medial vowel (if unsyncopated)	Percentage syncopated
<b>1. Final <i>r</i></b> (e.g. <i>hīeran</i> etc.)	115	114	-o- <i>ærarode</i> (x1)	99%
<b>2. Final <i>m</i></b> (e.g. <i>dēman</i> etc.)	87	87	n/a	100%
<b>3. Final <i>n</i></b> (e.g. <i>bærnān</i> etc.)	63	63	n/a	100%
<b>4. Final <i>l</i></b> (e.g. <i>tæ:lan</i> etc.)	26	26	n/a	100%
<b>5. Final <i>g, ng</i></b> (e.g. etc.)	42	42	n/a	100%
<b>6. Final <i>s</i></b> (e.g. etc.)	2	2	n/a	100%
<b>7. Final vowel</b>	1	1	n/a	100%
<b>8. Final <i>ð</i></b>	61	61	n/a	100%
<b>9. Final <i>d</i></b>	188	188	n/a	100%
<b>10. Final <i>p, c, t</i></b>	79	79	n/a	100%
<b>11. Final <i>C+son</i></b>	37	12	-e, -o (x1)	32%
<b>Total</b>	<b>701</b>	<b>675</b>	<b>n/a</b>	<b>96%</b>

Before moving on to discuss in more depth some of the complex interactions affecting the heavy stems, I repeat part of the table from (7.2), with the addition of the heavy stems, for the sake of comparison:

#### (7.4) Syncopation in light and heavy stems in EWS

	Total	Syncope	Percentage syncopated:
Light stems excluding dentals, e.g. <i>fremman</i> , <i>cnyssan</i> , <i>nerian</i> etc.	43	0	0%
Light stems ending <i>t</i> or <i>d</i>	12	12	100%
Heavy stems	701	675	96%

There is clearly a correlation between syllable weight and syncope, and this is shown to be statistically significant in light of chi-square calculations. There are many complications, however, and some further discussion is clearly needed. As shown in table (7.3), certain types clearly require further examination, in particular, those found in row (11). These will be considered separately in table (7.8). Also in need of further examination are the forms found in rows (8), (9) and (10), since although they syncopate consistently, the resulting forms vary between gemination, non-geminate consonant clusters and single consonants. In the case of final *ð*, we see the following:

#### (7.5) Formation of geminates after final *ð*

	<i>Total</i>	<i>ðd</i>	<i>ðð</i>	<i>dd</i>	<i>de</i>	< <i>ded</i> > ( <i>unsyncopated</i> )
<i>Final ð</i>	61	57	1	1	2	0

Whether or not a geminate is formed through the deletion of *-e-* in root-final *d* forms is dependent upon phonotactics. If the final *d* is part of a coda cluster, the geminate is not permitted, e.g. *gelende*, \**gelendde*. There are two exceptions to this, where a geminate is created after a cluster, and both involve /rd/: *hierd[d]e* 213.8 *CP (H)*, *begyrdde* *Chron.* 189.

(7.6) *Number of tokens with geminate d formed after consonants*

<i>Final -d</i>	<i>Total</i>	<i>dd</i>	<i>d</i>
<i>Final Vd</i>	129	129	0
<i>Final Cd</i>	59	2 (but C is /r/ in these cases)	57

(7.7) *Number of tokens with geminate t formed after consonants*

<i>Final -t</i>	<i>Total</i>	<i>tt</i>	<i>t</i>
<i>Final Vt</i>	17	16	1
<i>Final Ct</i>	46	1	45

The table above shows clearly that in Early West Saxon, a geminate is preferable to both the unsyncopated *ded*, and also to *unnecessary* deletion/simplification of *d*: *\*læde*, *lædde*. This also happens in the case of *t ~ tt*. Very few exceptions exist, and in the case of *Ctt*, the token comes from *ðyrstan*, *ðyrste CP* (H, C) 329.3, c 260.16 *ðyrstte H* 261.16, *cj. ðyrste (H, C) 31.7*, which Cosijn (1888) notes to be variable. In terms of OT, this can be analysed using the anti-deletion constraint Max IO (see Minkova 2012), though as revealed by the data in tables (7.6) and (7.7) the faithfulness requirement not to delete the consonant/simplify the geminate is overruled by the requirement not to create a CCC cluster (see Minkova 2012: 203).

Final obstruent+sonorant clusters have been shown to be of interest in the nouns and adjectives (see for the nouns Bermúdez-Otero 2005), and as we will see here, the weak verbs are no exception. Forms with a consonant + *r*, such as *afrefredon*, *hyngrede*, *timbrede*, *ofersylefredan*, strongly contrast the seemingly neat pattern of Class 1 weak deletion in after heavy syllables. This point has been discussed recently in Minkova (2012: 205). I will discuss this account further in 7.6.1. Other final sonorants forming part of a final cluster, such as *bytledon*, *symblede*, *wrixleden*, and also those ending in nasals such as *ðrysmān* also show

greater syncope failure rates than other heavy stems, though not to the extent of those ending in *r*. The numbers for these types are shown in table (7.8):

(7.8) *Syncope after obstruent + sonorant clusters*

Final cons+son	Total	Syncope	No syncope	Percentage syncopated
C+r	17	0	17	0%
C+l	10	5	5	50%
C+n	7	5	2	71%
C+m	3	2	1 (-o-)	67%

Note that in the case of *m* the anomalous unsyncopated form has an *o* medial vowel: *aðrysemodon*. It is therefore a form that may need to be treated with suspicion, as this vowel is a trademark of the non-syncope Class 2. The influence of the robustly productive weak Class 2 is widely acknowledged in the literature (e.g. Campbell 1959). If this form is indeed too problematic to be trusted as representing syncope in C+m forms, the percentage in the final cell for syncope could be 100%. In this case, there is a neat climb in syncope failure as the sonority of the final consonant increases. The numbers in the table are very low, and the fall in syncope in relation to higher sonority cannot be confirmed as significant using chi-square calculations, since the expected values for all but *r* are below 5. It is therefore not possible to say with conviction that the evidence here points to a relationship between sonority and syncope failure.

### 7.3. WEAK VERBS IN LINDISFARNE

In this section I will begin by providing an overview of the verb data from the Lindisfarne Gospels, taken from Cook's (1894) glossary. I have used Cook's tense and number labels, but in the event of potential ambiguity, or where forms are of particular importance I have consulted the printed edition (Skeat 1887) in order to see the form in its original context and also to check that the form is not the result of

an editorial emendation. Additionally, I have used the length marks presented in Cook. However, when the length marking in Cook contradicts those found in Bosworth & Toller (B&T) and the behaviour of the forms do not suggest that there is reason to assume differently, I have assumed the B&T length marks to be correct.

### *7.3.1. Syncope in the Lindisfarne weak past*

The paradigms of Class 1 of the weak verbs present the conditions for rich morphophonological interaction. The singular and plural past tense forms for weak verbs have been analyzed. I will also present data from the Class 2 of weak verbs, since though it does not pattern like the Class 1 verbs, I intend to present an account that includes the non-syncopating forms as well as the syncopating ones within the weak verb data.

#### *7.3.1.1. Data from Lindisfarne Class 1*

The first data table presents a comparison of syncope rates in the light and heavy Class 1 weak preterites in Lindisfarne. This is intended to answer the basic question of whether syllable weight plays any role in determining the outcome of HVD. The forms included are those which do not end in a dental, do not end in a consonant+sonorant cluster and do not include a geminate, as such forms will be discussed separately below. The table includes the number of forms showing *-a-*, as this is indicative of confusion between Class 1 and 2, and therefore may have a strong effect upon deletion rates. If, for example, the unsyncopated number happened to be the same as the number in *-a-*, we could deduce that syncope has applied only to *-e-*, and that *-a-* may be immune.

#### *(7.9) Class 1 heavy and light roots in Li.*

Class 1	Total number	Number syncopated	Unsyncopated	Number in -a	Percentage syncopated
Light stems	58	3	55	7	5%
Heavy stems	803	770	33	21	95.8%

As is usual with the verbs, the heavy forms outnumber the light forms significantly. However, it is clear that syncope applies with robust regularity in the heavy Class 1 forms, with a rate of 95.8%. The difference between syncope rates in heavy and light roots is shown to be significant when a chi-square test is applied. Add to that the fact that 21 of the 33 unsyncopeated tokens had medial *-a-* and the number of tokens with remaining unsyncopeated *-e-* drops to 15 (1.8% of the total). The light forms, in contrast are syncopeated in 5% of cases, and again in contrast to the heavy roots, the unsyncopeated forms are *-e-* in the majority of cases (48 out of 55).

Forms ending with an consonant+sonorant cluster are heavy, in that they contain a consonant cluster. Therefore, syncope, if applying purely on weight grounds, is expected to apply. As the numbers in this table confirm, epenthesis in the stem and syncope of the preterite ending interact:

(7.10) *Class 1 forms with a consonant+sonorant cluster*

Class 1 cons+son	Total number	Number syncopeated	Unsyncopeated	Epenthesis (with syncope)	Epenthesis (no syncope)	Percentage syncopeated
	91	63	28	24	1	69%

It appears to be the case that consonant+sonorant forms somewhat inhibit syncope. Although syncope is still frequent, and applies in 69% of tokens, this is a statistically significant drop when compared to the heavy forms without a consonant+sonorant stem coda. Epenthesis applies with syncope in 44% of the syncopeated tokens. There is only one example in which epenthesis applies and also syncope fails: *gefræppegedon* (next to *gefræppedon*). These figures will be further dissected in tables (7.3) and (7.4). Note that I have included not only obstruent+sonorant clusters, but also sonorant+sonorant clusters. Since sonority is the influential factor involved in epenthesis, and possibly even in deletion, it is necessary to ensure that by including both, the results are not obscured. In order to ensure this does not happen, I have compared the syncope rates of obstruent+sonorant and sonorant+sonorant cluster forms and have used chi square calculations to check whether they show a

statistically significant difference. The test shows that there is no statistical significance in terms of syncope. Therefore, it appears to be the case that sonorant+sonorant forms also stand apart from other heavy roots along with the obstruent+sonorant forms, demonstrating lower levels of syncope than a ‘normal’ heavy root. However, the similarity ends there, and when it comes to epenthesis, the sonorant+sonorant types must be studied separately. Consider the following tables:

(7.11) *Distribution of syncope in obstruent+sonorant cluster forms*

Final obs+son	Total	Syncope	Epenthesis with syncope	Epenthesis without syncope	Percentage syncopated
C+j	3	2 (x1 without epenthesis)	1	1	67%
C+r	25	15	15	0	60%
C+l	3	3	3	0	100%
C+n	2	0	0	0	0%
Total	33	20	19	1	57%

(7.12) *Distribution of syncope in sonorant+sonorant cluster forms*

Final son+son	Total	Syncope without epenthesis	Syncope with epenthesis	Epenthesis without syncope	No epenthesis, no syncope	Percentage syncopated
C+j	44	29	5	0	10	77%
C+l	2	2		0		100%
C+n	6	4		0	2	67%
C+m	4	4		0		100%
Total	56	39	5	0	12	86%

The high level of sonority in sonorant+sonorant clusters, many of which include the

semivowel /j/, permits syncope without epenthesis. Therefore, it appears to be the case that epenthesis is highly sensitive to sonority. The fact that consonant+sonorant clusters in general produce lower levels of syncope than other heavy stems indicates that syncope also shows some level of sensitivity to sonority, which is perhaps due to its interaction with epenthesis. Yet, as stated above, it is not possible reliably to claim any difference in levels of syncope in obstruent+sonorant and sonorant+sonorant cluster forms, meaning that at this stage in the light of the data it is not possible to claim that there is a correlation between syncope and small increases in sonority. The fact that higher levels of epenthesis seen in the obstruent+sonorant forms do not correspond to significantly lower levels of syncope indicates that epenthesis does not have the power to block syncope.

#### 7.3.1.4. *Roots ending in dentals*

The behaviour of dental-final roots is of great interest phonotactically, and interacts with gemination. The table below shows the rates of syncope in forms with a root-final dental, both geminate and heavy. I have also included the non-dental heavy roots for comparison. There were no light forms ending in singleton dentals. Furthermore, all but two of the 93 tokens here come from *settān* ‘set’, which is an interesting case in itself. As can be seen in table (7.5), it appears with both geminate and single consonants in the past tense. Campbell (1959: §753) treats it as light, and discusses its validity as evidence for originally short forms in *t* and *d* failing to undergo syncope in Anglian. In Wright & Wright (1925: §753), *settān* is noted to be part of a group of Class 1 subdivision (a) forms that undergo syncope, with many of the examples showing gemination of dentals. Although it would be possible to posit an analysis in which the geminate has been reanalyzed as underlying, it seems likely that in this historically light form, the final dental is the trigger for syncope, as non-dental light gemination forms do not undergo reanalysis as heavy forms.

I repeat here the data from the non-dental heavy roots (originally shown in table (7.1)) for the purpose of comparison. By comparing rows A and C it is possible to see whether dentals influence the rates of syncope in the target heavy roots:



(7.13) *Class 1 dental forms*

*Row B includes Class 1 subdivision (a) forms like settan (Wright & Wright 1925: §525):*

*geminate forms (Class 1 dentals)*

	Total number	Number syncopated	Unsyncopated	In -a	Percentage syncopated	Notes
A. Class 1 dentals (heavy)	514	505	9	5	98	geminate created through syncope: 68, +6x <i>dt</i>
B. Class 1 light geminates in dentals	93	93	0	0	100	geminate reduced: 5
C. Heavy forms	807	770	37	21	95	

As predicted in the handbooks, OE does not appear to look favorably upon forms in which a lack of syncopation results in <ded>. Once we take into account that five of the unsyncopated forms are syncope-immune -a-, we are left with a syncope failure rate of only 0.8%. However, the syncopation rate for non-dental heavy stems is also high, at 95%, and a chi-square test does not show this difference to be statistically significant. A deeper examination of the data is required in order to see why geminates are formed in some forms and not in others. In EWS (see Section 7.2 for data and discussion), Cosijn (1888: §120) reports that geminates are created in dental-final forms only when the final dental consonant is not part of a cluster. It therefore appears to be a cluster simplification process; the details of which will be expanded upon in the following sections. In the following tables, I have divided the Lindisfarne data into C+dental and V+dental in order to see whether this is also a restricting principle for Northumbrian Old English.

(7.14) *Formation of geminate [t]*

Lindisfarne Heavy roots in <i>-t</i>	Total number	tt	-t	[dVd]
Ct	47	4 x dt	40	3 x <i>-tad</i>
Vt	66	25 (+2 dt)	37	2 (1x medial <i>a</i> )

(7.15) *Formation of geminate [d]*

Lindisfarne Heavy roots in <i>-d</i>	Total number	dd	d	[dVd]
Vd	71	43	27	1
Cd	330	0	330	0

The results show that there is clearly a restriction upon the formation of geminates after consonants in Lindisfarne, as in Early West Saxon (Cosijn 1888: §120). The differences between gemination rates in vowel+t/d and consonant+t/d forms are of high statistical significance when a chi-square test is applied (for *t* geminates,  $\chi^2=13.96$ ,  $P=0.000187$ , and for *d* geminates,  $\chi^2=227.13$ ,  $P=<.0001$ ). The analysis therefore must account for the fact that geminates are banned after syllables that are long due to a consonant cluster, and variable after syllables that are heavy only on the basis of a long vowel.

7.3.2. *Weak Class 2 forms*

The Class 2 weak verbs are largely accepted (Campbell 1959, Wright & Wright 1925 etc.) not to syncopate due to the thematic <o> which precedes the *-de* suffix, resulting in forms such as *lōcode* (*Li. lōcade*) rather than *\*lōcde*. The Northumbrian variant of the medial vowel in Class 2 comes from Gmc. /u:/, while the West Saxon

variant *-o* comes from Gmc. /o:/, as there was variation in Gmc. between the two forms (Campbell 1959: §331.6). In terms of high vowel deletion, this should have no effect since though the historical vowels do contrast in height, they were both historically long. As such we can expect the *-ade* ending in Lindisfarne Class 2 verbs to remain undeleted regardless of syllable weight. Although the morphophonological interaction within Class 2 is expected to be minimal, the data have been examined in order to ascertain whether influence from Class 1 affects the resistance of the medial vowel to syncope. According to Campbell (1959: §757, §385), *-ade* predominates in Anglian, but *-ede* may occur in any dialect. Wright & Wright (1925: §222) and Campbell (1959: §385) assume occurrences of *-e-* in the plural, *-edon* to be the result of a phonological process also seen within other word classes, e.g. *heafon~heafenas* ‘heaven/heavens’. The phonological process is assumed to be one of dissimilation, occurring when a back vowel is followed by another back vowel in the following syllable; hence the preceding vowel takes on a more palatal place of articulation. Wright & Wright (1925: §222) go on to assume that this may even be the cause of some of the migration from Class 1b (including forms such as *hyngran* ‘to be hungry’) to Class 2. The exact nature of the effect of this palatalisation upon morphological crossing over is not described in Wright & Wright (1925), but it seems likely that since the past ending in Class 1 is *-ede*, such forms could become confused with Class 2 pasts exhibiting this palatalisation, e.g. *sealfedon*, *hynghredon*. This position is confirmed by Campbell (1959 §385), who indicates that the instances of *-edon* in the Class 2 forms are the result of a phonological process of vowel harmony in which the first of two successive back vowels is reduced to <e>, rather than being the result of morphological merging.<sup>25</sup> The forms that we might expect to be affected by this will be the plural forms in *-don*. Tokens from Class 2 exhibiting *-e-* in the past singular are potentially of more interest. Since the relevant vowels are unstressed, schwa reduction might also be expected. The crucial question here is; could reduction to schwa, or dissimilation to *-e-*, lead to morphological confusion, causing Class 2 forms to behave like Class 1 forms? Of course, this

---

<sup>25</sup> The assumption made by Campbell (1959: §385) and Wright & Wright (1925: §222) is powerfully supported by the Early West Saxon data (see Cosijn 1888: §129), as *-edon* is the usual suffix for the Class 2 plural indicative. Additionally, *-e-* is not attested in the singular in the place of *-o-*. Lindisfarne, on the other hand, behaves entirely differently.

question can only be addressed with the caveat that Class 2 is more productive and more likely to attract forms from Class 1 rather than the reverse. The following table summarises the data regarding *-e-*:

(7.16) *The distribution of -e- in Class 2*

Class 2	Medial <i>-e-</i>	Total
<i>-don</i>	30	200
<i>-de</i>	40	418

These are the data counts for all Class 2 forms. Although the plurals certainly have a higher percentage of forms in *-e*, there are 40 tokens showing *-ede*, in which, if we assume the handbook definition of the back vowel triggered process to be synchronically correct, the dissimilation process overapplies. This overapplication occurs to the extent that the difference between the rates of *-e-* before *-don* and *-de* is not statistically significant when tested using chi-square calculations. This may have the effect of at least the weakening the dissimilation process synchronically, and it may even be fair to say that in Lindisfarne there is no dissimilation process. Instead, a process of schwa reduction of unstressed vowels may be responsible, and due to its phonetic overlap with the forms of Class 1, some degree of class confusion would not be wholly unexpected. This may have implications for high vowel deletion, as the preservation of the unsynopated *-o-* in Class 2 is crucial for the retention of weight-based high vowel deletion throughout the weak verbs. If, for example, Class 2 and Class 1 were to merge through schwa reduction, one of two things could happen: Firstly, syncope could be extended to Class 2. Alternatively, the influx of unsynopated heavy stems could render the primary linguistic data insufficient to formulate a grammar in which deletion applies after heavy stems. As noted in Bermúdez-Otero (2005: 2), the latter scenario actually happens towards the end of the Old English period in West Saxon. It appears to be the case that the start of this process may be in progress in Lindisfarne. However, since there are a mere 70 tokens with *-e-* out of a total of 618 Class 2 forms, it is clear that the distinction between Class 2 and Class 1 remains relatively robust even in Lindisfarne.

### 7.3.2.1. Model Paradigm for Class 2

The paradigm given for the past indicative forms of Class 2 weak verbs, as found in Campbell (1959: §754) is repeated below (see also Section 2.2):

#### (7.17) Paradigm for Class 2 *lufian* ‘love’

Sg.

1      *lufode* (*Li. lufade/lufede*)

2      *lufodest* (*Li. lufadest/lufedest*)

3      *lufode* (*Li. lufade/lufede*)

Pl.    *lufodon* (*Li. lufadon/lufedon*)

As stated above, the paradigm would look the same for a heavy form such as *lōcian* (*Li. lōcgian*<sup>26</sup>) ‘look’. The Lindisfarne data confirm that *-ade* is the common form, with *-ede* representing a small minority of the Class 2 forms, and *-ode* being extremely rare, with only five instances. The following table contains the numbers of syncopated and unsyncopated tokens of light and heavy stems in Class 2. The numbers of unsyncopated tokens showing *-e-* rather than the expected *-a-* and rare *-o-* have also been included:

#### (7.18) Class 2 heavy and light forms

Class 2	Total number	Number syncopated	Number in <i>-e</i>	Percentage syncopated
Light stems	167	0	11	0.59
Heavy stems	261 (simple) heavy	14	56	5.6

As would be expected, syncope is very uncommon in both the heavy and light stems. Despite this, the difference between the rates in the light and heavy forms is

---

<sup>26</sup> The medial *-ig* interchanges with medial *-i*. In Lindisfarne, *-ig* is the predominant version (Campbell 1959: §267 & §757).

statistically significant.

In Class 1 we saw that consonant+sonorant clusters lowered the syncopation rates. There are only very few syncopated forms in Class 2 throughout all of the phonological types, and as expected, there are no instances of syncope among the consonant+sonorant cluster forms:

(7.19) *Consonant+sonorant forms in Class 2*

	Total	Number syncopated	In -e	% syncopated
Total cons+son Class 2	144	0	2	0

Finally, I have included the forms ending in a dental. When compared to the Class 2 heavy stems not ending in a dental, the difference between the syncope rates is not statistically significant.

(7.20) *Class 2 dental forms*

	Total	Number syncopated	In -e	% syncopated
Heavy Class 2 forms ending with a dental	61	3	0	4.9

It is therefore not the case that final dentals can force syncope in Class 2, which is not a surprising result, as the thematic vowel in Class 2 is expected to be immune to syncope in all circumstances.

To summarise, the data have revealed the following:

1. The rates of syncope are conditioned by syllable weight in Class 1.
2. Syncope, as expected, is not active in Class 2. However, the numbers of *-ede* endings in Class 2 may lead us to question whether the tokens with deletion show syncope of *-e-*, rather than *-a-*. It is not possible to claim with any confidence that the syncopated tokens definitely represent deletion of *-a-* or *-o-* when it is known that there are instances of *-e-* within the data set.

3. Forms ending in consonant+sonorant clusters show significantly lower rates of syncope than other heavy forms in Class 1.
4. Epenthesis interacts with syncope in forms ending with a consonant+sonorant cluster.
5. Forms ending in a dental present evidence of phonological conditions upon the creation of geminates.

### *7.3.3. Overview of the data from Lindisfarne*

The data revealed in the sections above show firstly that syncope is the most relevant HVD process for showing morphophonological interaction in Lindisfarne verbs. Apocope in the strong 1<sup>st</sup> sg.pres.ind. verbs, as outlined in Chapter 6, is too inactive for it to be suggested that it can be interacting with syncope.

Regarding syncope, we will also see in the next chapter that there are interesting differences between the behaviour seen in the past participles and weak past verbs. As stated above, I intend, in the next chapter to discuss the wider implications that this has for the analysis of language change and rule decline. Before that however, I intend to provide an OT analysis of the alternations found in the weak pasts, in which syncope appears to be at its most active. The deletion process here can certainly not be said to be acting only in accordance with syllable weight, though it appears to be the case that weight does play a role. I will consider the other factors outlined above, including the sensitivity to consonant+sonorant clusters. I will also discuss a recent account by Minkova (2012) in which an OT account is given which moves away from the assumptions provided in grammars such as Wright & Wright (1925) and Campbell (1959) and argues that syncope in the weak pasts of West Saxon is not weight conditioned. I will discuss the ways in which Lindisfarne differs from West Saxon, and also the extent to which such an analysis can shine light on the situation in Lindisfarne.

## 7.4. OVERVIEW OF THE DATA FROM LINDISFARNE AND EARLY WEST SAXON

The results from Early West Saxon and Lindisfarne provide evidence for a complex system for HVD within each of the grammars. I will now review the most important observations regarding the behaviour of syncope, detailing any differences and similarities between the two dialects.

### 7.4.1. Syllable weight

If we return to the figures for ‘simple’<sup>27</sup> heavy and light stems within the weak pret. in Class 1, there is a remarkable coherence between the Lindisfarne Gospels and Early West Saxon:

#### (7.21) *Comparison of weight distinction in Li. and EWS*

Class 1	Lindisfarne	EWS
Light stems	5% syncope	0% syncope
Heavy stems	95.8% syncope	96% syncope

These figures demonstrate that although there are numerous differences between Lindisfarne and Early West Saxon in terms of the behaviour of high vowel deletion (in the weak verbs and elsewhere), they both exhibit a strongly statistically significant preference for syncope after heavy stems, that is, in the conditions assumed in traditional accounts of high vowel deletion.

### 7.4.2. Final dentals

The data for final dentals in heavy stems in both dialects were not particularly enlightening, since, as we have just seen, syncope is so prevalent in heavy stems that

---

<sup>27</sup> These forms do not include final dentals or consonant+sonorant clusters.



an increase due to the final dental can only be minimal. Therefore, it is the light stems, and the possibility of overapplication that have the potential to be of interest. Can a final dental force syncope in light stems, in dialects in which light stems do not undergo deletion? For the Early West Saxon texts, although there were only 12 tokens for light dentals (compared to 43 for non-dental light stems) all of them were syncopated, while none of the non-dental lights was. Chi-square calculations indicate that there is a highly statistically significant difference, though it is important to note that the reliability of the calculations is compromised somewhat by the low numbers, which lead to an expected value of below five for the dental light stems. In Lindisfarne there is evidence to show that dentals *cannot* force syncope in Class 2 heavy stems, but can cause overapplication of syncope in light Class 1 weak forms. Although heavy, Class 2 forms are not subject to deletion, which is assumed traditionally to be due to the thematic *-o-*. The heavy Class 2 forms ending in a dental showed no significant difference in syncope, and like other forms within Class 2, syncope is very rare. In sum, we have evidence from EWS and Lindisfarne that suggests that syncope may overapply after dentals, as has been observed in the literature, and the analysis later in this chapter will reflect this.

#### 7.4.3. *Consonant+sonorant clusters*

The Class 1 forms ending in consonant+sonorant clusters are yet another area where the basic syncope patterns are shown to be similar in both dialects under investigation. However, there are also important differences between the two dialects, and the analyses in the following sections must reflect these. Both in Lindisfarne and in EWS, consonant+sonorant clusters are associated with lower overall rates of syncope than in ‘simple’ heavy stems. In Lindisfarne, the results are as follows:

(7.22) *Effect of consonant+sonorant clusters in Li.*

Lindisfarne	Total number	Number syncopated	% syncopated
Class 1 cons+son clusters	91	63	70%
Class 1 'simple' heavy roots	803	770	96%

This difference is statistically significant when a chi-square test is applied. Likewise, for Early West Saxon, we have a similar result:

(7.23) *Effect of consonant+sonorant clusters in EWS*

EWS	Total number	Syncope	% syncopated
Class 1 cons+son clusters	37	12	32%
Class 1 'simple' heavy stems	701	675	96%

Early West Saxon more strongly disfavours syncope in consonant+sonorant clusters than Lindisfarne, though both dialects associate lower levels of syncope with these final clusters. Another distinguishing feature between Early West Saxon and Lindisfarne that is of great interest relates to the interaction of epenthesis and syncope. In Early West Saxon, this relationship is fairly straightforward. If we take a form such as *timbran*, past.sg. *timbrede* 'built', and consider its prosody: [<sub>ω</sub>[timbr + ede]], we can see that if syncope were to apply: [<sub>ω</sub>[tim.br+de]], we are left with a unsyllabifiable cluster, where [r] cannot become part of the coda or onset: [<sub>ω</sub>[timb.r.de]]. This fact is noted in Minkova (2012: 203). There are potentially a number of ways in which this problem could be resolved, but the two most relevant ones here are a) blocking deletion, as in *timbrede*, or b), adding an epenthetic vowel after deletion has taken place, as in *timberede*. In Early West Saxon, deletion is blocked in the majority of cases, as we have seen. Epenthesis therefore does not feature heavily. However, there are a couple of instances of epenthesis, though these are unexpected, as they appear along with an undeleted suffix vowel: *sigelede Chron. 877*, *aðrysemodon Or 224.34*. The latter example has been discussed above in

Section 7.2.4 of this chapter, and will not be given a great amount of attention due to the highly anomalous (within Class 1) *-o-* thematic vowel. Interestingly, though the majority of such Early West Saxon forms follow *timbrede*, having no deletion, and thus, no need for epenthesis, the few cases where syncope proceeds do not undergo epenthesis: *eglde CP (H, C) 235.8, H 309.3, siglde Or. 17.16&19, wyrsmde CP (C) 258.1, ðrysmð Or. 142.22*. Since epenthesis is highly sensitive to sonority, I assume that the reason for the lack of epenthesis here, and more importantly, the success of syncope, comes from the relatively low sonority difference between the two elements of the final cluster. Take, for example, /br/, in *timbran* which never syncopates. This cluster is a stop followed by a highly sonorous liquid. As Minkova (2012: 203) observes, [br] is not attested as a coda cluster throughout the dialect. On the other hand, /sm/ involves a relatively unsonorous nasal, which follows an obstruent which is more sonorous than a stop. Finally, due to palatalisation, it is an approximant, and not a stop that is present in *eglde* and *siglde*: /jɫ/, and it appears to be the case that such a cluster is more easily syllabified, and therefore does not warrant epenthesis, or block syncope. These examples aside, in Early West Saxon there is no competition between *timberde* and *timbrede*, with *timbrede*, i.e. no syncope, being the winning form. On the other hand, in Lindisfarne, we have a more complex picture. In the following table, which repeats some of the data shown in table (iv), we can see that in C+r clusters, syncope proceeds in 60% of cases, but in contrast to EWS, all of these syncopated tokens undergo epenthetic repair. This indicates that the same forces are at work in Early West Saxon and in Lindisfarne, banning forms such as *timbrde*, when the sonority discrepancy is too high, but that in Lindisfarne epenthesis is available as an option, whereas in Early West Saxon it is not.

(7.24) *Epenthesis and deletion in C+r forms in Li.*

Final obs+son	Total	Syncope	Epenthesis with syncope	Epenthesis without syncope	Percentage syncopated
C+r	25	15	15	0	60%

To sum up, in Lindisfarne the analysis must make provision for the fact that epenthesis and syncope appear to be in competition, whereas in Early West Saxon the banning of syncope, subject to sonority, is the only option.

#### 7.4.4. Formation of geminates

As shown in the preceding sections, both Early West Saxon and Lindisfarne have a restriction upon the environment in which a geminate may be formed from a syncopated dental-final stem + *de/don*. In both dialects, vowel+d/t forms were permitted to form geminates, while consonant+d/t forms were not. I repeat here the tables for EWS and *Li.* forms in *-d*:

##### (7.25) Formation of geminate *d* in EWS and *Li.*

(a)

EWS Heavy roots in <i>-d</i>	Total number	<i>dd</i>	<i>d</i>	<i>ded</i>
Final <i>Vd</i>	129	129	0	0
Final <i>Cd</i>	59	2 (after <i>r</i> )	57	0

(b)

Lindisfarne Heavy roots in <i>-d</i>	Total number	<i>dd</i>	<i>d</i>	<i>ded</i>
Final <i>Vd</i>	71	43	27	1
Final <i>Cd</i>	330	0	330	0

Both dialects clearly permit gemination, but not in instances when a *CCC* cluster will be created. Geminate simplification is not preferred in forms such as *cidde*, so we can see that gemination is not penalised in order to prevent CC clusters. However, providing there is not an illegal coda cluster (such as *br*, discussed above), there are

instances of non-geminate CCC clusters formed through syncope in EWS, such as *giernde*. Therefore, a combination of coda weight, phonotactics and geminate prevention must all come into play.

## 7.5. CLASS 2

In the final part of this summary of HVD behaviour in Early West Saxon and Lindisfarne, I consider the behaviour of Class 2 in two ways: Firstly, in relation to whether deletion applies at all,<sup>28</sup> and secondly, with respect to the salience of Class 2 as a separate class. In EWS, there are no cases of syncope in Class 2. In terms of standing apart from Class 1, the EWS Class 2 forms overwhelmingly show *-o-* or *-a-*. There are only five instances listed in Cosijn (1888: §129) of *-ede*. There are, however, a sizable number of *-edon* forms (89 in total), compared to x37 *-odon* and 2x *-adon*. Recall that in Campbell (1959: §385) it is claimed that a process of dissimilation causes a back vowel + *-don* to surface as *-e-*. The figures from EWS back this up, and since *-e* applies in the majority of plural EWS Class 2 forms, while being virtually absent from non-plurals, it is fair to say that this is likely to be the result of a phonological process, as Campbell (1959: §385) claims. Therefore, through the medial vowel and through the absence of syncope, we can see no evidence to suggest that Class 2 and Class 1 are collapsing in together in EWS. This is of great importance for high vowel deletion, as such a collapse would render syncope totally unlearnable (see Bermúdez-Otero 2012: 188–9) for discussion of the implications of this). As the data numbers just quoted represent all that is of interest for this study regarding the Class 2 verbs in EWS, full data counts have not been taken.<sup>29</sup> Lindisfarne, on the other hand, proved to be slightly less regular with respect to Class 2 verbs, particularly in relation to their medial vowel. As shown in Section 7.3.2, unlike in EWS, the distribution of *-e-* in Class 2 in Lindisfarne showed no significant correlation with back vowel suffixes. Instead of a robust process of synchronic dissimilation, as in EWS, in Lindisfarne we have either the reduction of the unstressed vowel, or the beginning of morphological merging. It is important to

---

<sup>28</sup> The assumption here is, following the literature, that there will be no deletion in Class 2.

<sup>29</sup> Readers interested in the Class 2 data are directed to Cosijn (1888: §129).

note though that the numbers are low and that the rates of deletion in Class 2 are very low. Although it appears to be the case that Lindisfarne may be further along the route towards the collapse of Class 1 and Class 2 than EWS is, it is certainly still very far from being enough to compromise syncope to any significant extent.

It has become clear through these sections that in many ways high vowel deletion is in a similar state in Lindisfarne and in Early West Saxon, though there are some subtle differences that need to be accounted for in the analysis, in particular the behaviour of epenthesis.

## 7.6. ANALYSIS AND DISCUSSION OF THE DATA

Now that we have the data for Lindisfarne and Early West Saxon weak preterites, I will examine the implications of the alternations, providing an analysis that accounts for syncope in the Lindisfarne and Early West Saxon weak preterites. I will also now discuss in some detail the recent account of Early West Saxon provided in Minkova (2012).

### 7.6.1. *The weak preterite: Is there any evidence for weight-based HVD?*

In Section 7.4, we have shown that in both Early West Saxon and the Lindisfarne Gospels, there is a statistically significant difference between syncope rates in ‘simple’ heavy and light stems. I therefore propose that the constraint ranking introduced in Chapter 2 should be used in order to force weight-conditioned deletion in both dialects:

(7.26)

(a)

hi:er+ede ‘heard’ [ <sub>ω</sub> [.hi:e.].re.de.]	MAX-V <sup>2</sup>	STRESSWELL	ANCHOR-R	PARSE-Ǿ	MAX-V	PARSE-σ
[ <sub>ω</sub> [.hi:e.].re.de.]				**!		**
[ <sub>ω</sub> [.hi:er.]. Ø de.] ǿ				*	*	*
[ <sub>ω</sub> [.hi:er.]. ØdØ.]	*!		*		**	
[ <sub>ω</sub> [.hi:e.].red Ø.]		*!	*		*	*

(b)

her+ede ‘praised’ [ <sub>ω</sub> [.he.re.].de.]	MAX-V <sup>2</sup>	STRESSWELL	ANCHOR-R	PARSE-Ǿ	MAX-V	PARSE-σ
[ <sub>ω</sub> [.he.re.].de.] ǿ				*		*
[ <sub>ω</sub> [.her Ø.].de.]				*	*!	*
[ <sub>ω</sub> [.her.]. Ø d Ø.]	*!		*		**	
[ <sub>ω</sub> [.he.].red Ø.]		*!	*		*	*

Note that apocope of the weak pret. ending is ruled out here by STRESSWELL. Apocope should never have affected the final *e* of *-ede*, and was not high and light in the period in which the height conditions endured. This can be enforced in the synchronic grammar without the need to specify underlying vowel height conditions. However, as the data have shown, this constraint ranking cannot alone account for the complexities presented by the weak preterites in either *Li.* or EWS. I will argue that this constraint ranking is essentially correct in determining whether deletion applies, but that other phonological tendencies are in place, thus requiring a more complex analysis. The idea that weight conditioning is still crucial to the analysis is however not necessarily the consensus, and I will now discuss a recent analysis by Minkova (2012), in which it is argued that the alternations cannot be accounted for simply using the historical weight of the root. Minkova highlights the importance of a number of other factors in determining whether deletion proceeds or

not, including the derivational history, the presence of *-r-* to the left of the thematic vowel, the distribution of syncopeated and unsyncopeated forms, including an imbalance between poetry and prose (Minkova 2012: 196). The following diagram, adapted from Minkova (2012: fig. 13.2) reflects the patterns in West Saxon for the occurrence of syncope in the 1<sup>st</sup> and 3<sup>rd</sup> pret.ind., taking into account some of these wider factors:

(7.27) *Behavior of syncope in WS*

Class 1	Syncopeated <i>-de</i>	Non-Syncopeated <i>-ade, -ode, -ede</i>
Heavy Root	hǣlde (hǣlan ‘heal’) grǣtte (grǣtan ‘greet’) *grǣttede wy:scte (wy:scan ‘wish’)	timbrede (timbran ‘build’) *timbrde sīowode (sīowan ‘sew’) *sīowde gyrede (gyrwan ‘prepare’) *gyrwde
Light Root	tealde (tellan ‘count’) *tælede hredde (hreddan ‘save’) *hreddede lette (lettan ‘hinder’) *lettete	cnysede (cnyssan ‘knock’) also cnyste herede (herian ‘praise’)

The shaded boxes highlight the forms that are not ‘expected’ according to the traditional definitions of high vowel deletion. It must be noted that although some of these forms represent complexities within the system, such as the effect of dentals etc. they do not necessarily provide counter-examples to the weight-based analysis. For example, one of the examples cited in Minkova (2012: fig. 13.2) of syncope failing to apply in a heavy stem; *sīowode*, is a form that according to Campbell (1959: §753.6) is synchronically Class 2, and therefore not subject to deletion. Heavy stems ending in *w* from Class 1, e.g. *trīewde* \**trīewede* do show the expected deletion.

According to Minkova (2012: 197–8) exceptions to the weight driven definition of syncope found in the shaded boxes can be grouped together into the following categories:

- Stems ending in a dental undergo syncope whatever the weight (*hredde*, *hǣlde*).
- Roots ending in sonorants undergo syncope irrespective of the root weight (*fylde*,



*cen*de, *cyr*de etc.).<sup>30</sup>

c) Ill-formed clusters will not be triggered by syncope regardless of the syllable weight of the stem (e.g. -CC final clusters such as *timbran* > *timbrede* \**timbrde*).

Minkova's (2012) analysis challenges the assumption that syllable weight synchronically plays any role at all in determining the outcome of syncope, arguing instead that the paradigm has been reanalysed, and the alternations lexicalised. This account includes forms from Class 2, which are assumed all to be of Type-V. I will shortly discuss these observations in more detail, and will also consider whether they might apply in Lindisfarne, but before that I will briefly sketch out the analysis relating to West Saxon found in Minkova (2012) and consider whether the radical overhaul of the UR assumptions found in this account do indeed improve upon the complicated verbal high vowel deletion situation. The basic premise of Minkova's analysis is that rather than showing the application of prosodically motivated high vowel deletion, the alternations with and without a medial vowel represent differing underlying representations. The verbs are therefore divided into two broad categories; Type-C (consonantal) and Type-V (vocalic) (Minkova 2012: 201). The Type-C forms are assumed to be monosyllabic, and lack an underlying formative vowel, e.g. *hæ*l-an 'heal' 1&3 sg.pret. *hæ*l-de, *grē*tan 'greet' 1&3 sg.pret. *grē*tte. These forms may end in a singleton or geminate consonant. On the other hand, the Type-V stems are underlyingly disyllabic in nature, and include as part of the UR of the stem a high unstressed vowel in the infinitive and an unstressed back or mid vowel in the preterite (Minkova 2012: 201), e.g. *her*ian 'praise' 1&3 sg.pret. *her*ede, *lō*cian 'look' 1&3 sg.pret. *lō*code, *los*ian 'lose' 1&3 sg.pret. *los*ode. The loss of historical weight as part of the account could be problematic for those forms in Class 2, which are traditionally assumed to be protected from deletion due to their historically long thematic vowel. It is noteworthy however that in Minkova's (2012) account the Class 2 weak verbs, which fall naturally into the Type-V stems, are accounted for along with the *ner*ian type verbs of Class 1. A form such as *lō*cian, regardless of weight, will therefore appear with an underlyingly specified medial

---

<sup>30</sup> Among the examples presented by Minkova (2012: 198), there are no sonorant-final stems undergoing syncope that are traditionally assumed to be short.

vowel in the preterite. On the other hand, *hǣl-an*, with a root-final /l/, should therefore appear without a medial vowel in the preterite. The alternations in the weak verbs of West Saxon are, Minkova notes, too complex to fall neatly into these two categories. Such complexities include the gemination seen in forms such as *hredde* ‘saved’ and also the apparent contradiction to Minkova’s account found in forms such as consonant-final *timbran*, which rather than showing no vowel, instead appears as *timbrede*. I will now discuss the way in which Minkova accounts for these apparent problems within the framework of OT, and will consider whether there are indeed forms which provide problems for Minkova’s analysis.

Starting with the forms ending in a dental, which in West Saxon surface with a geminate in the preterite, Minkova’s (2012: 204) analysis enforces the gemination with two constraints, which demand that two adjacent segments agree in voicing, and prevent unsyllabifiable consonant clusters:

(7.28)

a)

\*(C)CCC-]<sub>PWD</sub>

Avoid unsyllabifiable consonant clusters (Minkova 2012: 202).

b)

AGREE VOICE C<sub>OBSTR.</sub> ]<sub>PWD</sub>

PWD-initial obstruents must agree in voicing (Minkova 2012: 203).

These two markedness constraints, enforce gemination in *grētte*, but not in *\*sendde*. Gemination is not permitted, under this analysis, since *\*sendde* violates \*(C)CCC-]<sub>PWD</sub>. These constraints compete with NOGEM (avoid identical adjacent consonants), and also interact with faithfulness constraints MAX-IO (Input segments must have output correspondents) and DEP-IO (Output segments must have input correspondents) (Kager 1999: 67–68), which if ranked below NOGEM might cause an alternative form of repair such as vowel epenthesis.

## (7.29)

base + /d-/ <i>grēt+de</i>	AGREE VOICE C <sub>OBSTR.</sub> ] PWD	*(C)CCC-]PWD	DEP-IO	MAX-IO	NOGEM
<i>grēt+de</i>	*!				
<i>grēt+de</i>		*!	*		*
<i>grētV+de</i>			*!		
<i>grē+te</i>				*(!)	
<i>grēt+te</i> ☞					*

It is worth noting here that in Minkova's analysis the only difference between Type-C forms ending in a dental and other Type-C forms is implied to be the gemination. This is because the analysis does not assume that there is overapplication of deletion in dental stems, since they are simply listed as Type-C. Minkova states that '[v]erbs with stems ending in non-dental single consonants [...] behave like *grētan*; the only difference is [...] their preterite forms do not violate NOGEM' (Minkova 2012: 205). Since both types are assumed to lack the medial vowel underlyingly in this analysis, there is no need for any phonological motivation resulting in the dental stems to be associated with lower levels of syncope in the analysis. This departs from the traditional analyses, which assume that verbs ending in *t* or *d* may exhibit overapplication of syncope (e.g. Campbell 1959: §753). Whether the process is viewed as one of syncope, or as epenthesis, there may be some restriction within West Saxon disfavours dental sequences separated by schwa, which can be repaired by gemination or consonant simplification. This also appears to be the case in Lindisfarne where syncope is fairly common but variable within 'normal' Type-C Class 1 verbs, compared to the Type-C Class 1 verbs ending in a dental in which it is closer to obligatory.

Returning to the traditional UR assumption, in order to enforce forms such as *sette*, *grētte*, I propose that the following constraint, based upon the Generalized OCP (Suzuki 1998: 42) is added to the basic HVD tableau for weak preterites:

(7.30)

\*[DəD]

A sequence of two alveolar stops is prohibited where [ə] is intervening material

(7.31)

(a)

base + /d-/ <i>grēt+ede</i>	MAX-V <sup>2</sup>	ANCHOR- R	*[DəD]	PARSE-Ǿ	MAX-V	PARSE-σ
[ <sub>ω</sub> [.gre:.].te.de.]			*!	**		**
[ <sub>ω</sub> [.gre:.].tØte.] <sup>☞</sup>				*	*	*
[ <sub>ω</sub> [.gre:.]. tØtØ.]	*!	*			**	
[ <sub>ω</sub> [.gre:.].ted. Ø]		*!	*		*	*

(b)

base + /d-/ <i>set+ede</i>	MAX-V <sup>2</sup>	ANCHOR- R	*[DəD]	PARSE-Ǿ	MAX-V	PARSE-σ
[ <sub>ω</sub> [.se.te.].de.]			*!	*		**
[ <sub>ω</sub> [.set.Ø].te.] <sup>☞</sup>				*	*	*
[ <sub>ω</sub> [.set.Ø]tØ]	*!	*			**	
[ <sub>ω</sub> [.se.te.]dØ]		*!	*		*	*

Since (7.31 a) is heavy, the ranking without \*[DəD] would suffice. However, in the case of short forms ending in /t,d/, as in (7.31 b), \*[DəD] forces syncope, in avoidance of the Generalised OCP violation. I have left AGREE VOICE C<sub>OBSTR.</sub>]<sub>PWD</sub> out of the ranking for reasons of space, though I assume it to be in place, and hence *tt*, rather than *td*, is the result. This is the case in both EWS and in *Li*, though as we will see in the next chapter, the past participles prove problematic in *Li*.

The second set of problematic forms accounted for using the above set of constraints in Minkova (2012: fig. 13.5) includes words such as *timbran*. Being a Type-C form, this word is assumed to have an underlying monosyllabic root. A process of epenthesis is assumed to prevent an unsyllabifiable cluster; *timbrede* does therefore not constitute failure of syncope, but epenthetic repair:

(7.32)

base + /d-/ <i>timbr+de</i>	AGREE VOICE C <sub>OBSTR</sub> ] PWD	*(C)CCC-]PWD	DEP-IO	MAX-IO	NOGEM
timbr+te	*!				
timbr+de		*!			
timbVr+de			*		
tymb+de		*!		*	
timbrV+de <sup>☞</sup>			*		
timbVr+Vde			**!		

Modified from Minkova (2012: fig. 13.5)

Note that in this tableau the ranking that is of consequence is  $*(C)CCC-]_{PWD} \gg DEP-IO$ . A reverse ranking would not allow vowel epenthesis in order to prevent the consonant cluster /mbrd/. In forms such as *bytl+de* ‘build’, in which the obstruent+sonorant cluster is not part of a larger cluster (compared with *timbran*, in which the obstruent+sonorant cluster follows a consonant), another option is implied by the analysis:

## (7.33)

base + /d-/ <i>bytl+de</i>	AGREE VOICE C <sub>OBSTR</sub> ] PWD	*(C)CCC-]PWD	DEP-IO	MAX-IO	NOGEM
<i>bytl+te</i>	*!				
<i>bytl+de</i>		*!			
<i>bytlV+de</i>			*		
<i>byt+de</i>				*	
<i>bytlV+de</i> <sup>(7)</sup>			*		
<i>bytlV+Vde</i>			**!		

Since the faithfulness constraints are equally ranked, *byt+de* is predicted as a harmonious candidate. According to Minkova (2012: 207), this is to allow for forms such as *nemned*, next to *nemde*, in which *n* faces deletion, and also *cemde* (*cemban* ‘to comb’).<sup>31</sup> This freedom is also claimed to have the benefit of allowing for forms such as *gyrwan* ~ *gyrede* ‘to prepare’, in which epenthesis and *w* deletion are attested. However, the alternation involving root-final *w* is clearly not best accounted for using this ranking. None of the forms that are claimed to require this ranking have an obstruent+sonorant root-final cluster, with *cemban* being sonorant+obstruent, and the other cited forms having a sonorant+sonorant cluster. There is a clear distinction here, with final deletion being banned in obstruent+sonorant cluster forms, even when following another consonant, as in *timbrede* (\**timbede*). In failing to capture this difference, the above ranking implies that *timbede* might surface variably. Cosijn (1888: §120) notes that *w* is lost after *r*, and retained after long vowels, yielding forms such as *gyrede* \**gyrwede*, and *trīewede* ‘to believe’. This can be accounted for more easily with a weight-based account, if we assume that the loss of *w* after *r* yields a short syllable, preventing syncope from applying: [ω[.gy.re.].de.]]. On the other hand, the heavy forms in which *w* is retained have long vowels, and thus the syncope in the *-ede* ending is unproblematic.

<sup>31</sup> Neither *cemban* nor the form *nemned* are attested in the EWS data set.

Minkova (2012: fn 23) notes that according to Campbell (1959: §326–327), certain forms such as *efnan* may appear without epenthesis in the preterite: *efnde*. Minkova’s solution is to allow for syllabic sonorants in satisfaction of  $*(C)CCC-]_{\text{PWD}}$ . I have therefore added this candidate to the following tableau:

(7.34)

base + /d-/ <i>bytl+de</i>	AGREE VOICE $C_{\text{OBSTR}} ]_{\text{PWD}}$	$*(C)CCC-]_{\text{PWD}}$	DEP-IO	MAX-IO	NOGEM
bytl+te	*!				
bytl+de		*!			
bytVI+de			*		
byt+de				*	
bytlV+de <sup>¶</sup>			*		
bytVI+Vde			**!		
by.tl+de					

One problem here is that such a candidate would actually win outright, since it does not violate DEP-IO, unlike epenthesis. We are therefore left with the question of why epenthesis is ever permitted. In this instance, it would be necessary to add  $\text{SONPK} \rightarrow \sigma$  and  $\text{NUC} \rightarrow V$  to the ranking. When  $\text{SONPK} \rightarrow \sigma$  is ranked above  $\text{NUC} \rightarrow V$ , syllabic sonorants would be preferred. When  $\text{NUC} \rightarrow V$  is ranked above  $\text{DEP} \rightarrow V$ , epenthesis would be allowed in preference to syllabic sonorants. The variation attested in EWS would be made possible by assuming stochastic ranking as discussed in Chapter 4.

This analysis presents one final issue, which is that the ranking does not predict where the epenthesis will occur. This is rather problematic for West Saxon, given that *timberde*, as opposed to *timbrede*, is not a possible outcome. Minkova (2012: 209) mentions that the handbooks note an alternative way of preventing *\*timbrde*, which is epenthesis between *b + r*. Indeed, in the previous part of this chapter we have seen that in Lindisfarne there is competition between a stem vowel (*timberde*) and inflexional vowel (*timbred*), though Early West Saxon does not allow

this.

Traditionally,<sup>32</sup> the underlying representation of the root, stem and suffix in OE would be assumed to be /timbr+e+de/. Therefore, only a vowel between *b* and *r* can be considered to be epenthetic, but the stem formative, specified underlyingly is not considered to be epenthetic. According to Minkova's analysis, the stem UR for this Type-C form is also /timbr/, but the suffix, as detailed above, is /+de/. Therefore in both frameworks the vowel within [timber] is epenthetic. The difference here is that the vowel in *timbrede* is, rather than the failure of syncope, a method of repair by vowel epenthesis. I will now consider whether the traditional analyses, in which the theme vowel is underlyingly present, rather than epenthetic, are able to account for *timbrede*. In the following tableau I have continued to use \*(C)CCC-]<sub>PWD</sub> to prevent \*timbrde, but have also included the weight-motivating constraints discussed in Chapter 2. Another modification is the division of MAX-IO (Input segments must have output correspondents) (Kager 1999: 67–68), into the following two constraints:

(7.35)

(a)

MAX-C (McCarthy & Prince 1995)

Every input consonant has an output correspondent.

(b)

MAX-V (McCarthy & Prince 1995)

Every input vowel has an output correspondent.

There is evidence in Old English to suggest that this division is necessary, as repair processes commonly have a choice between the removal of a vowel and the removal consonant. Both forms of deletion are attested in OE. The result of this split, and of the higher ranking of MAX-C is the prevention of the form *timb+de*, in which there is a syncopated consonant.

---

<sup>32</sup> *Traditionally* here is used in a broader sense, to refer not only to handbook accounts, but to any framework which assumes that the alternations within this paradigm stem from weight-based syncope.



(7.36)

base + /d-/ <i>timbr+ede</i>	AGREE VOICE C <sub>OBSTR.</sub> ] PWD	*(C)CCC- ] PWD	*MAX-C	DEP-IO	PARSE-Ǿ	MAX-V
[ <sub>ω</sub> [.timb.].r.te.]	*!				*	*
[ <sub>ω</sub> [.timb.].r.de.]		*!			*	*
[ <sub>ω</sub> [.tim.].bVr.de.]				*!	*	*
[ <sub>ω</sub> [.timb.].de.]			*!		*	**
[ <sub>ω</sub> [.tim.].bre.de.] <sup>☞</sup>					**	
[ <sub>ω</sub> [.tim.].bV.re.de]				*!	***	

This analysis correctly predicts *timbrede* as the winner, without competition. This is therefore more satisfactory for Early West Saxon than the analysis in (7.28), which implies that forms such as *timberde* will occur, which is not the case. Recall though, that the variation between *timberde* and *timbrede* that we must prevent from being predicted in EWS is exactly what we have seen to be attested in Lindisfarne. A selection of relevant forms ending in a non-geminate obstruent+sonorant cluster appearing in the pret., which show the variation within Lindisfarne are listed here:

#### 7.6.2. Obstruent+sonorant cluster forms

(7.37)

(a)

*lēðra* ‘to lather’

Pret.ind.3sg. *lēðrede*

(b)

*frōefra* ‘to soothe’

Pret.ind.3pl. *frōefredon*

(c)

*gehyngra*

1<sup>st</sup>sg.pret.ind. *gehyncgerde* Mt(Li) 25,35; 3rd sg. *gehyncgerde* Mt(Li) 4, 2. 25, 42  
*gehyngerde* Mt(Li) 12, 3. L. 4, 2. 6, 3; *gewyncerde* Mk(Li) 11, 12, *hyngerde* Mk.  
 2,25; *hyncerde* Mt(Li) 21, 18 3 pl. *hyncerdon* Mt(Li) 12, 1

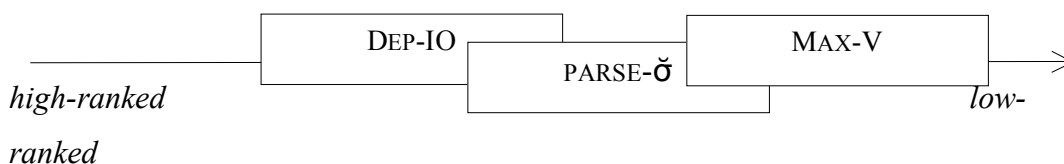
(d)

*getimbra*

3<sup>rd</sup>sg.pret.ind. *getimberde* Mt(Li) 7, 26, 21,33. Mk(Li) 12, 1. L. I 5, 9; *getimbrade* Lk(Li) 7, 5; 3 pl. *getimberdon* Lk(Li) 17, 28; *getimbredon* Mt(Li) I 21, 18; *getimbradon* Mk(Li) 12, 10

The analysis in (7.31), though perhaps better for EWS, is therefore problematic for Lindisfarne in that it does not allow for such variation. The analysis, however, only requires minor modifications in order to account for the variation in *Li*. Returning to the stochastic rankings discussed in Chapter 4, if we assume that PARSE-Ō, Max-V and Dep-IO have overlapping ranking values on the continuous ranking scale (Boersma 1997), we can allow for *timberede* and *timbrede*:

(7.38)



Let us now examine the results of this stochastic ranking, when applied to *timbran*:

(7.39)

(a)

base + /ede/ <i>timbr+ede</i>	DEP-IO	PARSE-Ō	MAX-V
[ <sub>ω</sub> [.tim.].bVr.de.]	*!	*	*
[ <sub>ω</sub> [.tim.].bre.de.] <span style="font-size: small;">☞</span>		**	

(b)

base + /ede/ <i>timbr+ede</i>	PARSE-Ō	DEP-IO	MAX-V
[ <sub>ω</sub> [.tim.].bVr.de.] $\nabla$	*	*	*
[ <sub>ω</sub> [.tim.].bre.de.]	**!		

Though the analysis found in Minkova (2012) also would allow us to represent the alternations in C+son forms, we lose the representation of the weight distinction, which has been shown to be statistically significant. Though the weight distinctions are lost in a later period (Bermúdez-Otero 2012: 188), the evidence suggests that in both EWS and *Li*, this has yet to happen, and that the grammars in question instead show a stage in which the synchronic conditions for syncope are split between the original weight conditions and other phonological and morphological conditioning. It is also worth noting some of the further complexities that would be faced if applying the lexicalisation account in *Li*, since the variation attested in the weak preterate would require either an unstable UR, with for example, *stīora* ‘to direct’: *stīorede* ~ *stīorde* being simultaneously Type-V and Type-C.

### 7.6.3. Class 2 analysis

It is unsurprising that the Class 2 data have shown a lack of syncope in EWS and *Li*, and this is in line with traditional handbooks. Minkova (2012) is able to account for the lack of syncope, since the weak verb paradigms have become lexicalised. Therefore, the Class 2 forms are simply Type-V, and have a stem vowel underlyingly. No phonological rule for syncope is therefore required either in Class 1 or Class 2. I have argued that this account faces problems when it comes to some of the exceptions noted in Minkova, and, for example, does not model any difference between attested *w* deletion and forbidden deletion of the sonorant in obstruent+sonorant clusters, as in *timbrede* \**timbede*. I have also argued that the lexicalised account loses the benefit of modeling the statistically significant weight distinction that is evident in the weak pret. of EWS. The issue that must be dealt with though, in my weight-based account, is how to model in the synchronic grammar the

lack of HVD in Class 2 verbs. Historically, the medial vowel was protected by its low height, and its length. Synchronically, though, the thematic vowel is sometimes reduced to schwa, and moreover, HVD deletes non-high vowels. The account I will argue in favour of will therefore make reference to the historical length of the thematic vowel, and follows Bermúdez-Otero's (2005: §7.6) description of nouns containing in a historically long derivational affix, such as *nīeten*. There is therefore evidence from outside of the verb paradigm to support the assumption that it is historical length that synchronically protects the Class 2 verbs from deletion. According to Bermúdez-Otero (2005: §7.6), nouns such as *nīeten*, WGmc. \*nauti:na-, have a historically long medial vowel bearing secondary stress. He argues, though, that they do not synchronically have secondary stress or underlying length. This can be shown by the fact that they have not been immune to lowering processes (Bermúdez-Otero 2005: §7.6). The same can be said for the Class 2 weak verbs, which I argue show the results of variable schwa reduction. Though *-edon*, from *-odon*, in *Li*, might be expected to be the result of dissimilation only affecting the plural according to Campbell (1959), the number of instances of *-e-* in the singular show that it is actually no more likely to occur in the plural than in the singular. Therefore, rather than dissimilation, I would argue that this is simply vowel reduction. Therefore, similarly to the *nīeten* nouns, it would be unsafe to claim that there is underlying length protecting the weak Class 2 forms from deletion. For the *nīeten* nouns, Bermúdez-Otero (2005: §7.6) suggests that the historical stress has left behind a property of underlying foot headedness in the medial vowel. The underlying representation of *nīeten* is therefore:

(7.40)

*nīeten* 'beast'

	bare stem
	*
UR	/ni:yten-/
Stem level output	[ <sub>ω</sub> [.ni:y][.ten.]]

(7.41)

(a)

MAX- $\acute{V}$  (Kiparsky forthcoming)

Let  $\alpha$  be a segment in the input. If  $\alpha$  is the ultimate head of a foot, then  $\alpha$  has an output correspondent.

(b)

IDENT-stress (Pater 2000: 252)

Let  $\alpha$  be a segment in the input. Let  $\beta$  be an output correspondent of  $\alpha$ . If  $\alpha$  is the ultimate head of a foot, then  $\beta$  is the ultimate head of a foot

With the stem-level output; [<sub>o</sub>[.ni:y.][.ten.]], MAX- $\acute{V}$  prevents the deletion of *-e-*, because it is the head of its own foot. On exiting the word level, the constraint banning weak final feet causes defooting: [<sub>o</sub>[.ni:y.].ten.] (Bermúdez-Otero 2005 fig. 7.45). I will now consider whether this account could translate to the verbs. We know that a root such as Class 1 *hīer-*, historically gains a stem vowel *-e-*, which is then affixed with pret. *-de* (Lass 1994: §7.3.2). For Class 2, the situation is similar:

(7.42)

Pret. *sealfode* ‘salved’ = [<sub>root</sub>] *sealf* + [<sub>stem</sub>] *-o-* + [<sub>pret.</sub>] *-de*

The stem-forming vowel found in the preterite is also that found in the weak past participle, and the weak Class 2 verbs are immune to syncope whether preterite, or past participles. The scenario outlined here would provide us with the following derivation:

## (7.43)

Scenario 1	Class 2 heavy	Class 1 light	Class 1 heavy
Stem level:	<i>sealfian</i> root+stem sæalf+o [ <sub>ω</sub> [.sæal.][.fo.]]	<i>herian</i> root+stem her+e [ <sub>ω</sub> [.he.re.]]	<i>hīeran</i> root+stem hi:r+e [ <sub>ω</sub> [.hi:e.].re.]]
Word level	[ <sub>ω</sub> [.sæal.][.fo.]]+de	[ <sub>ω</sub> [.he.re.]]-de	[ <sub>ω</sub> [.hi:e.].re.]]-de
Syncope	—	—	[ <sub>ω</sub> [.hi:er.].de.]
Defooting	[ <sub>ω</sub> [.sæal.].fo.de.]	—	—
Output:	[ <sub>ω</sub> [.sæal.].fo.de.]	[ <sub>ω</sub> [.he.re.].de.]	[ <sub>ω</sub> [.hi:er.].de.]

This derivation has a serious problem. Although weak final feet can be built at the stem level if, and only if, presepified, these feet still may not be monomoraic. FtBin will prevent the footing in [<sub>ω</sub>[.sæal.][.fo.]]. The solution to this is that the *-d* must also be added at the stem level.<sup>33</sup> The weak preterite shares its stem vowel with the weak past participle, and, it is also the case with the weak past participle that the *-d* is added at the stem level. This is indicated by the fact that the stem level adjectival *nom/acc.pl.neut. -u* is added on top of the stem: *PP hered+u*. To treat the weak preterite in the same way solves our problem, and thus the creation of a weak foot at the stem level can proceed: [<sub>ω</sub>[.sæal.][.fod.]]. At the word level, which is the domain of syncope, the weak preterite *-e* (sg.) and *-on* (pl.), as well as the oblique adjectival affixation in the case of past participles are added, triggering syncope as appropriate. Syncope, though, is blocked in [<sub>ω</sub>[.sæal.][.fod.]-e], as the target vowel is the head of a foot. The amended derivation is as follows:

<sup>33</sup> It is also assumed in Lahiri (2009: §21.3) that the *-d* is added at the stem level.

(7.44)

Scenario 2

Class 2 heavy

Class 1 light

Class 1 heavy

Stem level:	<i>sealfian</i>	<i>herian</i>	<i>hīeran</i>
	root+stem sæalf+o+d [ <sub>ω</sub> [.sæal.][.fod.]]	root+stem her+e+d [ <sub>ω</sub> [.he.re.]d]	root+stem hi:r+e+d [ <sub>ω</sub> [.hi:e.].re.]d]
Word level	[ <sub>ω</sub> [.sæal.][.fod.]]-e	[ <sub>ω</sub> [.he.re.]d]-e	[ <sub>ω</sub> [.hi:e.].red.]]-e
Syncope	—	—	[ <sub>ω</sub> [.hi:er.].de.]
Defooting	[ <sub>ω</sub> [.sæal.].fo.de.]	—	—
Output:	[ <sub>ω</sub> [.sæal.].fo.de.]	[ <sub>ω</sub> [.he.re.].de.]	[ <sub>ω</sub> [.hi:er.].de.]

The constraint ranking relevant to these outputs is:

(7.45)

(a)

Stem Level		MAX-V	IDENT-STRESS	NONFIN	PARSE-Ø	MAX-V
hi:ered	[ <sub>ω</sub> [.hi:e.].red.] $\nabla$					
	[ <sub>ω</sub> [.hi:e.][.red.]]			!*		
*   sæalfod	[ <sub>ω</sub> [.sæal.].fod.]		*!			
	[ <sub>ω</sub> [.sæal.][.fod.]] $\nabla$			*		

(b)

Word Level		MAX-V	NONFIN	PARSE-Ö	IDENT-STRESS	MAX-V
[ <sub>ω</sub> [.hi:e.].red.]+e	[ <sub>ω</sub> [.hi:e.].re.de.]			**!		
	[ <sub>ω</sub> [.hi:er.].de.]] $\nabla$					*
	[ <sub>ω</sub> [.hi:e.][.re.de.]]		*!			
[ <sub>ω</sub> [.sæal.][.vod.]]+e	[ <sub>ω</sub> [.sæal.].fo.de] $\nabla$				*	
	[ <sub>ω</sub> [.sæal.][.fo.de.]]		*!			
	[ <sub>ω</sub> [.sæalv.].de.]	*				

## 7.7. OVERVIEW

In this chapter the data have been shown to support an analysis that models synchronically the weight sensitivity of syncope. The lexicalised Type-V/Type-C account in Minkova (2012) has therefore been rejected on the basis that it does not capture a phonological process that is active within the grammar. As we will see in the next chapter, the inflected weak past participle in EWS also shows a robust weight condition, together with the effects of \*[DəD]. For the inflected past participle, it would theoretically be possible to assume that the same Type-V and Type-C lexicalised root+stem combinations exist as for the weak preterite: dat. *hīerdum* *hīer+d+um* ‘heard’ and *here+d+um* ‘praised’. This would require the past participle stem-formative *-ed* ending to have been reanalysed as *-d*. This of course would run into serious problems when considering the uninflected past participle, in



which the *-e-* is present: *hīered*, *hered*.<sup>34</sup> It would not be preferable to have the requirement for a syncope process in the past participles and none for the weak preterites within the same language, for the reason that both classes present very similar alternations.

---

<sup>34</sup> I am grateful for Ricardo Bermúdez-Otero for sharing this observation in terms of the past participle behaviour with me.

## CHAPTER 8

### High and non-high vowel deletion in the past participle

#### 8.1. INTRODUCTION: TWO SIMILAR FORMS OF DELETION

The past participle, historically, is not part of the verbal paradigm, but comes from an independent thematic adjective that is formed from the verb root (Lass 1994: 160). In Old English the participle declines as an *a*- stem adjective, if strong masculine or neuter, and as an *o*- stem adjective if strong feminine. If the participle, when declining as an adjective, is preceded by a determiner or a possessive, it will decline as an *n*-stem weak adjective. The past participle usually takes the unstressed prefix *ge*- (Campbell 1959: §732.*h*). The unstressed prefix *ge*- does not affect the outcome regarding syncope; nor does the declension of the adjectival suffixes. All that is of consequence is whether the adjectival suffix is vowel initial. I will primarily be discussing syncope in this chapter, as this is the process that is of greatest interest in relation to the participle. However, some discussion of apocope is also warranted particularly in the case of the inflected participles in Lindisfarne. The past participles of the weak and strong declensions, in *-ed* and *-en* respectively will be considered, and interestingly, they give rise to some important differences in the behaviour of syncope. Throughout this chapter, I will be distinguishing high vowel syncope from non-high vowel syncope. Historically, the weak past participle in *-ed* comes from older *-id* (Wright & Wright 1925: §528). This would make it a suitable target for high vowel syncope synchronically. On the other hand, the strong ending, *-en*, comes from Prim. Gmc. *-ēno*, *-ōno*, which has a non-high vowel. This should therefore not be expected to be a target for high vowel deletion synchronically, but is expected to undergo non-high vowel syncope. Of central importance when making this distinction is that non-high vowel syncope, unlike its high counterpart, is not weight conditioned. I repeat here the definitions found in the philological literature (repeated from Sections 2.2 and 2.5):

(8.1) *High vowel deletion* (affecting the weak past participles)

‘Short *u* and *i* [...] as well as the *u* and *i*, which arose from the shortening of *ō* and *ī*, disappeared [...] in disyllabic forms when the first syllable was long, but remained when the first syllable was short.’

(Wright & Wright 1925: §215)

(8.2) *Non-high vowel deletion* (affecting the strong past participles)

‘In all medial syllables the non-high vowels /a e æ/ were subject to syncope in all environments except where the syllable was closed.’

(Hogg 1992: §6.14)

The two processes have in common that they remove medial vowels only when in an open syllable. For example, in an uninflected past participle such as *coren* ‘chosen’, deletion is expected not to apply, while in its inflected counterpart, deletion is expected: dative *coren+um* > *cornum*.<sup>35</sup> Likewise, high vowel deletion targets only the vowels of open syllables. Therefore, whether strong or weak, uninflected past participles are not expected to undergo either form of deletion, and only the weak *-ed* participles, when inflected, are expected to show an active weight condition.

---

<sup>35</sup> Although “expected”, it must be noted here that this form is unattested in Lindisfarne.

### (8.3) Handbook account of syncope in past participles

Weak past participle (Class 1) <i>-ed</i> <i>high vowel syncope</i>		Strong past participle <i>-en</i> <i>non-high vowel syncope</i>	
Short stem: <i>fered</i> ‘carried’	Uninflected: <i>fered</i>	Short stem: <i>drifen</i> ‘driven’	Uninflected: <i>drifen</i>
	Inflected: <i>ferede</i>		Inflected: <i>drifne</i>
Long stem <i>dōemed</i> ‘deemed’	Uninflected: <i>dōemed</i>	Long stem: <i>bunden</i> ‘bound’	Uninflected: <i>bunden</i>
	Inflected: <i>dōemde</i>		Inflected: <i>bundne</i>

However, in addition to the non-high ancestor for the strong *-en* participles, an alternative ancestor is mentioned in the literature (cf. Hogg & Fulk 2011, Wright & Wright 1925) that is short and high, sometimes triggering *i*-mutation in a few forms. This alternative ancestor would be a candidate for high vowel syncope. This may lead to a highly complex relationship with syncope, and as such, the *-en* forms will be examined for signs of weight conditioning.

#### 8.1.1. Chapter organisation

This chapter focusses on vowel deletion in the past participles, but this presents a complex set of issues. Firstly, the weak and the strong participles are treated separately, as they give rise to different phonological complexities. Also, two types of vowel deletion must be examined, and the possibility of the merging of these processes. Therefore, weight conditioning will be examined. The following sections also consider the possibility of overapplication of high vowel and non-high vowel syncope in the uninflected participles. The organisation is as follows:

Section 8.2 discusses the issues raised by the handbook accounts of non-high vowel deletion and high vowel deletion in the past participles.

Section 8.3 deals with the weak participle, and high vowel deletion, presenting the data for EWS in 8.3.1 and *Li.* in 8.3.2. An analysis within OT is then presented in Section 8.4.3.

Section 8.5 examines the strong past participle and non-high vowel deletion, and presents the data for EWS and *Li.* in sections 8.5.2 and 8.5.3, moving on to an analysis and discussion of the issues raised in 8.5.4.

## 8.2. OVERVIEW OF THE HANDBOOK ACCOUNTS FOR HVS AND N-HVS

### 8.2.1. High vowel deletion and the weak past participles

Returning to the traditional definition of HVD, we can see that the conditions for syncope are only created when a heavy past participle undergoes inflection. In the past participle of a heavy weak verb such as *lēfan* (WS *līefan*) ‘permit’, PP *lēfed*, the target for syncope, when inflected is the *e* of *-ed*. The uninflected form *lēfed* does indeed present an unstressed vowel in an unfooted syllable, but as it is in a closed syllable, deletion is not expected to apply: [ω[.le:].ved.]]. However, the vowel-initial<sup>36</sup> inflectional affixation of the past participle, as in, for example, the dative singular masculine *-um*, would open up this target syllable, allowing deletion to apply: [ω[.le:].ve.dum.]] ~ [ω[.le:v.].dum.]]. Therefore, since only inflected past participles are expected to undergo deletion, they will be the main focus of the discussion in this chapter, though some discussion of the uninflected participles is also warranted (see below). Furthermore, vowel-initial suffixes are the only ones of relevance here, as only they are in need of an onset, thus stealing the coda protecting the medial vowel from deletion. However, as is well known in the philological literature such as Campbell (1959) and Wright & Wright (1925), syncope goes well beyond its limits in specific phonological contexts within the West Saxon weak uninflected participles. This context, more specifically, is the existence of a root-final *d* or *t*, as in *send+an* ‘send’, and in *gemēt+an*. Such forms, when forming

<sup>36</sup> In addition to the vowel-initial suffixes, the */r/*-initial suffixes are also able to take the coda consonant as part of the onset: */li:fe.dra/*. The */r/*-initial suffixes, however, cannot form a possible onset with the strong past participle: *bunden*, *though*, as *\*nr-* is not a permissible onset.

uninflected past participles, may actually trigger syncope in the *-ed* formative: *send*, *met(t)*, as opposed to ‘expected’ *sended*, *meted*. It appears to be the interaction of the final dental and the dental past participle *-ed*, and as such, uninflected strong participles in *-en* will not be discussed here.<sup>37</sup> I will deal with this apparent overapplication in uninflected past participles in 8.3.1.

### 8.2.2. Non-high vowel deletion and its exceptions

Regarding non-high vowel deletion, Campbell (1959: §343) notes that failure of syncope may occur in inflected strong past participles, by analogy to the uninflected past participles in which syncope is not expected. The example cited by Campbell is *corene*, and the analogy-based assumption is that the uninflected and unsyncopeated form *coren* would influence the lack of syncope or restoration of the vowel in *corene*. A similar account is provided in Hogg & Fulk (2011: §4.54), who make the presumption that non-high syncope operates within the strong past participles, noting that the situation is ‘broadly parallel to that found in the disyllabic adjectives of similar structure [...], though overall, syncope is less widely found with the participles’. Hogg & Fulk (2011: §4.54) suggest that the reduction of syncope in the past participle may be due to the need to reduce allomorphic variation within the paradigm, which is enforced by the prevalence of the uninflected, and thus unsyncopeated participles. This makes sense, but leaves unexplained the discrepancy between strong and weak past participles, both of which have a highly prevalent uninflected unsyncopeated form, e.g. *bunden* ‘bound’, *hīered* ‘heard’. I argue that the phonological nature of the root must also be taken into consideration in an account of syncope in the past participle. I will later argue therefore that forms such as *corene* are not the result of a random process of analogy that causes paradigmatic uniformity, but instead are the result of a phonological condition robust enough to cause forms such as *\*cornum* to be unattested in Lindisfarne.

---

<sup>37</sup> The data in Cosijn have been checked to make sure that there is no exception to this assumption, but I have not presented the data. In Lindisfarne, the only potentially interesting form is *segn*, from the contracted verb *gesea* ‘to see’.

### 8.2.3. Problems

If we are to analyse non-high vowel syncope and high vowel syncope as synchronically active processes, there are certain problems that must be taken into consideration, and the potential for overlap between the two processes must not be underestimated. As described earlier, there are only two phonologically distinguishing elements between the two processes: vowel height and weight conditioning, however, these distinguishing elements are far from robust:

- High vowel syncope, as explained in handbooks, fails to apply in many contexts. The weight condition is variable, particularly in the weak past participle (see for example Hogg & Fulk 2011). The data from Lindisfarne and EWS have been examined in order to see whether there is an active weight condition in weak participles.
- High vowel syncope applies to vowels that are synchronically non-high due to lowering processes, which may suggest the relaxing of the vowel height conditions.<sup>38</sup> Weight-based high vowel deletion also comes to affect an innovative non-high suffix in *-a* for the nom/acc.pl.neut. in Late West Saxon (Bermúdez-Otero 2005: §7.5). It is therefore necessary to consider the possibility that the two processes might merge synchronically.
- The strong past participle has two ancestors for *-en*, one of which was high, the other of which was non-high. The possibility that this may have caused synchronic confusion will be investigated.

### 8.3. HIGH VOWEL DELETION AND THE WEAK PAST PARTICIPLE IN *-ed*

I will now leave aside non-high vowel deletion and the strong participles temporarily, and will focus on the behaviour of high vowel syncope in weak *-ed* forms. Sections 8.3.1 and 8.3.2 present the data for the uninflected participles in

---

<sup>38</sup> The lack of deletion in the weak Class 2 paradigm is not assumed to be connected to vowel quality, but to underlying foot head specification (as discussed in Chapter 7).

Early West Saxon and Lindisfarne, and 8.4 moves to the inflected forms, in which HVS is phonologically expected. The presentation of the data will be followed by an OT analysis of high vowel deletion in the past participles in Lindisfarne and Early West Saxon, and incorporates additional phonological conditioning which is evident in the data. The analysis assumes that weight-based high vowel syncope is active in the weak past participles within both dialects.

### 8.3.1. *The uninflected weak past participles in EWS*

As stated above, on the basis of handbooks such as Campbell (1959), which deal primarily with West Saxon, we should expect to see some overapplication of syncope in uninflected weak stems in *-ed* after a root-final dental. The following data tables will allow us to examine this further, in order to determine: 1) to what extent this overapplication occurs, 2) whether this overapplication is constrained in any way and 3) whether there are any further (morpho-)phonological complications. The data are taken from Cosijn (1888: §117) for the light roots, and (1888: §121) for the heavy roots. Table (8.4) presents the uninflected light and heavy forms in *-ed*, excluding those with root-final *t/d*, since dental forms require closer examination.

#### (8.4) *Early West Saxon: behaviour of uninflected weak Class 1 past participles*

Past Part. Uninflected forms in <i>-ed</i>	Total	Number syncopated
Light	36	0
Heavy	258	1 <i>getæld CP H, C 337.23</i> ( <i>sellan</i> type: see Campbell 1959: §753.9)

The numbers here firmly establish that HVD does not overapply in uninflected past participles lacking a root-final *t/d*. I shall now examine the dental-final roots in



isolation, in order to ascertain the extent of the overapplication that Campbell (1959: §752), and also the status of any geminates created through syncope (e.g. *lādd*):

#### (8.5) Closer examination of final dentals in EWS

Past Part. uninflected forms in - <i>ed</i>	Total	Number syncopated	% syncopated
Light dental forms	20	20	100%
Heavy dental forms	103	73	71%

We now know that not only are dental environments virtually the only circumstance in which this form of overapplication applies, but that syncope in dentals is in fact preferred. The constraint ranking in the analysis must therefore account for this variation, and provide the motivation for deletion to proceed in this non-weight conditioned environment. Through closer examination of the resulting geminates, we will also see that prosodic constraints are in force. The following table looks at the creation of geminates through syncope overapplication after a) light stems, b) heavy stems with a long vowel and simple (or absent) coda, and c) heavy stems with a complex coda:

#### (8.6) Closer examination of geminates created through syncope in EWS

Past Part. uninflected forms in -ed	Total syncopated forms	Total number of geminates formed through syncope		% gemination formed
Light stems	20	14		70%
Heavy stems	73	VV+gem	12/35	34%
		VC+gem	1/38 ( <i>begyrdd</i> 171.5 (H))	3%

These numbers indicate that gemination is prevented in the majority of heavy stems when uninflected. As we shall see, the situation changes when we come to examine the inflected past participles in *t/d*. Moreover, when a heavy form is heavy due to a

coda cluster, rather than a long vowel, the final geminate is prevented in all cases except for the one listed. In the weak preterite, this avoidance of geminate formation in heavy stems with complex codas is also in evidence, as described in Minkova (2012) and in the previous chapter of this thesis. We therefore clearly have a set of phonological conditions unrelated to HVD, that will require the modeling of i) degemination in VCCC forms, ii) variable degemination after VVCC forms and light forms, and iii) variable deletion of the medial unstressed vowel in uninflected *t/d* participles. Additionally, the variable degemination in light forms such as *sett* will be considered, since the geminate actually leads to a more well-formed foot than that of degeminated *set*. This is due to the fact that FTBIN requires that a foot is binary at some level, while NONFIN requires that the foot is not final in the prosodic word:  $[\omega[\text{.set.}]] \sim [\omega[\text{.se.}]\text{t}]$ . Since FTBIN is top-ranked (Bermúdez-Otero 2005: §7.3),  $[\omega[\text{.set.}]]$  is the outcome that is forced by degemination, in violation of NONFIN. The full phonological account will be presented in Section 8.5.3 of this chapter.

#### 8.4.1. Inflected past participles in EWS

One of the main issues to be addressed in this section is whether or not there is evidence for syncope respecting weight constraints in the past participles in Early West Saxon. The data will show that in contrast to the strong indicative verbs, in which syncope applies across the board, there is indeed evidence to suggest that weight-based syncope is active in the weak past participles. This places the weak past participles in line with the weak preterite, indicating that the Class 1 weak verb paradigm is an active domain for syncope.

Table (8.7) shows the numbers tokens affected by syncope in short and long stems, within Class 1 weak verbs. Those within the long category are those in which high vowel syncope is expected to apply. I have excluded the forms with root-final *t/d* as those behave in a distinctive way, and are considered separately in the next section.

(8.7) *Syncope rates in weak Class 1 inflected past participles*

Weak -ed past participles (with weak and strong adjectival suffixes)	Total	Syncope	% syncope
Light	19	0	0%
Heavy	194	105	54%

(8.8)

Heavy forms with strong adjectival suffixes	Total	Syncope	% syncope
Strong n/a.p.n. & n.s.f.	22	8	36%
Other vowel-initial suffixes (strong adj.)	139	80	58%

As shown in table 8.7, the forms in which syncope should be traditionally expected to apply show variation of syncope. On the other hand, the short roots, as expected, trigger no syncope. The difference between the rates in heavy and light stems is statistically significant ( $X^2=20.28$ ,  $P= <.0001$ ). This shows that, unlike in the present strong indicative verbs, there is a correlation between syllable weight and deletion. Table 8.8 provides the nom/acc.pl.neut. and nom.sg.fem. in long stems in order to see whether there is a distinction between the syncope rates at the stem and word levels in the past participles. The percentage suggests that there is a tendency towards failure of syncope in the nom.sg.fem. and the nom/acc.pl.neut., but the numbers are rather low, and not statistically significant ( $X^2= 3.44$ ,  $P= 0.063636$ ). The handbooks, for example Campbell (1959: §643.5), note that although adjectives in the nom/acc.pl.neut. and nom.sg.fem. should undergo syncope in heavy+light+suffix forms, the medial vowel is often ‘restored’.<sup>39</sup> As the participles decline in the same way, it might be assumed that a similar situation would exist in the relevant participle cases (Campbell 1959: §643.5). As described in earlier chapters, recent studies (including Bermúdez-Otero 2005 and Bermúdez-Otero & Hogg 2003) have

---

<sup>39</sup> On the choice between syncope and apocope in such cases, see Thompson (2007), and 2.5 of this thesis.

argued that evidence for stratification is provided by the way in which apocope comes to apply to non-high suffixes, selecting a morphological condition rather than a phonological one. Additionally, Bermúdez-Otero (2005: §7.6) argues that syncope behaves differently in the nom.sg.fem. and the nom/acc.pl.neut., with failure of both apocope and syncope, i.e., trisyllabic forms such as *hēafodu* being allowed in *hēafod* type nouns in the nom/acc.pl.neut, but not within other morphological cases within the *a*-stem paradigm. The EWS data in table 8.8, however, are unable to shine any light on the situation in terms of whether syncope is uninhibited in the past participles in the same way as in the nouns.

#### 8.4.1.2. The effect of t/d roots upon syncope in weak participles

The influence that dental-final roots have upon syncope overapplication in the uninflected past participles of EWS has been briefly discussed in 8.4.1. Before providing an analysis, the inflected data must be taken into account. The past participles ending in /t/ and /d/ present almost 100% syncope rates, as shown in the following table:

(8.9)

Past Part. inflected forms in <i>-ed</i>	Total		Total syncopated	Total number of gemimates formed	% gemination formed
Light	16		15 (94%) (1 apocopated)	16	100%
Heavy	VV+gem	55	55 (100%)	55	100%
	VC+gem	26	25 (96%)	0	0%

Compare the syncope rates to the non-dental root-final consonants, shown in the table in (8.12), which I repeat here:

(8.10)

Weak <i>-ed</i> past participles (with weak and strong adjectival suffixes)	Total	Syncope	% syncope
Light	19	0	0%
Heavy	194	105	54%

The distinction between the rate of syncope in heavy *t/d* forms and in other heavy forms is highly statistically significant ( $X^2=51.72$ ,  $P=<.0001$ ). In addition to the previously discussed overapplication in uninflected forms which end in a dental e.g. *gehȳd* ‘hide’ next to *gehȳded*, there is also overapplication in forms taking a consonant-initial suffix. Consider the following examples, in which weak participles show syncope when taking the accusative masculine suffix *-ne*:

(8.11)

*acc.sg.masc.*<sup>40</sup>

*gehæftne CP (H) 423.19 (gehæfed+ne)*

*gesetne CP (H) 441.31 (geseted+ne)*

*gewildne CP (C) 218, 21, Or. 132.22 (gewilded+ne)*

The forms above, in taking a consonant initial suffix, *-ne*, are not expected to undergo high vowel syncope, as a vowel-initial suffix is needed to create the conditions for the process, by causing the target vowel to be in an open syllable. This overapplication is clearly as a result of the *t/d* root-final consonant, as such overapplication does not occur in other *acc.sg.masc.* forms. In addition to such overapplication, there is, according to the handbooks a similarly phonologically conditioned tendency for syncope to underapply: participles which do not end in dentals often level out the unsyncopeated form to inflected cases e.g. *gelīefede* ‘believed’ (Campbell 1959: §752, Hogg 1992: §624.2). Campbell assumes this to be

---

<sup>40</sup> These tokens are all of the accusative singular masculine *-ed* forms ending in a stem-final dental. These are not included in the table counts, since an onset cluster of [dn-] is not possible. Only vowel-initial or *r*-initial suffixes have been included, as [dr-] is a permissible onset, and therefore results in an open medial syllable that can be targeted by HVD.

an analogical process. However, it is worth asking the question of why the morphological process of analogy would be behaving in an apparently phonologically conditioned manner, resulting in both under- and overapplication within the same paradigm. It will instead be argued that although the lower rates of HVD in non-*t/d* heavy forms may be due to analogical pressure from the uninflected, and therefore undeleted participle, the syncope after *t/d* cannot be analogical. I will argue that a phonological constraint against homorganic stops separated by a schwa is the motivation for the increased deletion in dental forms.

## 8.5. WEAK PAST PARTICIPLES IN THE LINDISFARNE GOSPELS

### 8.5.1. *The uninflected -ed participles in Lindisfarne*

As expected, uninflected forms have very low syncope rates within the Lindisfarne Gospels, though the behaviour of syncope in the past participles departs significantly from that found in Early West Saxon. Recall that the target vowel in uninflected forms is part of a closed syllable, and should therefore not be the target of high vowel deletion.

#### (8.12) *Uninflected past participles in -ed within Lindisfarne*

Class 1 Weak uninflected Past. parts (ending <i>-ed</i> )	Total	Number syncopated	Lexical items syncopated	Geminate formed through syncope	% syncopated
Light	73 (39 of which are <i>t/d</i> final)	0	-	-	0%
Heavy	490 (113 of which are <i>t/d</i> final) <sup>41</sup>	9	<i>ceigan</i>	0	2%

<sup>41</sup> This figure includes 125 heavy underlying geminate forms.

The numbers here show a striking departure from the situation found in Early West Saxon. Though there were 113 uninflected Class 1 dental-final forms, not one shows overapplication of syncope. At the same time, we see apparent overapplication in forms with no dentals, e.g. *ceigan geceigd* Mt(Li) 5, 9. 5, 19. 23,8. Mk(Li) I 2.15. 3,23. Lk(Li) 2,21. 21,37. Such forms might also lead to the formation of a VVCC cluster, though it is likely to be the case that rather than syncope overapplication, the lack of the vowel is down to the merging of the /ei/ diphthong with the /j/ semivowel: [tʃe:ijd], possibly causing vocalization of /j/: [tʃe:id]. This is supported by the following spelling, found in Lk(Li): *gecegid*.

It is impossible of course to discount the possibility of phonological conditioning within dental environments within Lindisfarne until we have examined the affixed weak forms in 8.5.2. However, what is clear is that dentals do not trigger overapplication in uninflected forms as they do in Early West Saxon, and the only options attested in, for example, *send*, are *sended*, *sendad*, *sendet* and *sendat*. Also worth noting is that none of the *timbran* types showed overapplication of syncope, and therefore none showed epenthesis within the stem. This reflects the assumptions laid out in the handbooks, e.g. Hogg (1992: §6.19). Unsurprisingly, the Class 2 weak uninflected participles show absolutely no cases of syncope overapplication out of a total of 266 heavy tokens (54 of which have root-final *t/d*). The analysis of Lindisfarne, as regards high vowel deletion and overapplication in the weak past participles will therefore be simpler than that found in Early West Saxon.

Lindisfarne and Early West Saxon have shown distinctly different behaviour in terms of uninflected past participles. In terms of the weak past participles in *-ed*, Early West Saxon has shown very strong phonological conditioning that forces syncope to overapply in the majority of dental-final forms, whether light or heavy. On the other hand, Lindisfarne has presented no such evidence from the uninflected side. Overapplication of syncope is extremely rare in Lindisfarne, and the few cases shown are non-dental, and likely not to represent actual overapplication.

### 8.5.2. Inflected weak past participles: Lindisfarne

The first part of this section will deal with the inflected weak past participles ending in *-ed*. As expected, the Class 2 weak past participles do not undergo syncope. Out of 34 heavy tokens, none showed deletion. On the other hand, the Class 1 weak inflected past participles do show active syncope. The following table shows the numbers of inflected *-ed* past participles that are syncopated, together with information regarding which root-final consonants are present in the instances of syncope:

(8.13)

<i>Li</i> : light past participle inflected forms in <i>-ed</i>	Total	Number syncopated	Behaviour of <i>t/d</i> forms	% syncopated
Class 1	16	0	10 forms in <i>t/d</i> , no syncope.	0%

(8.14)

<i>Li</i> : heavy past participle inflected forms in <i>-ed</i>	Total	Number syncopated	Behaviour of <i>t/d</i> forms	% syncopated
Class 1	85	50	Total: 9 Sync: 4	59%

Although we once again have a situation in which the light verbs are outweighed significantly by the heavy tokens, the data indicate strongly that there is an active weight condition for syncope in relation to the Class 1 weak inflected past participles. ( $X^2 = 18.64$   $P = <.0001$ ). There is nothing to suggest that final dentals influence the outcome of syncope, as there is in fact a greater number of unsyncopated dental forms than syncopated tokens. Additionally, recall that in Lindisfarne the overapplication of syncope in uninflected dental *-ed* participles did not happen, in contrast to Early West Saxon. We can conclude, therefore, that since heavy forms have a healthy rate of syncope, but light stems and uninflected stems do not, weight-based syncope is alive and fairly robust in the weak *-ed* past participles



in Lindisfarne. We can also see that there is no evidence of further phonological conditioning being added in the case of the weak participles.

### 8.5.3. Analysis of HVS in the weak participles of EWS and Lindisfarne

To begin the analysis, I will repeat some of the constraints introduced in the previous chapter, and also used in the analysis on weak verbs. Separate analyses will be given for the two dialects in question. The data in this chapter have shown that in the case of the weak *-ed* past participles, both dialects display the effects of weight-based syncope. Therefore the OT analysis presented for the weak verbs will motivate high vowel syncope in an inflected form such as *līefede*. The constraints used have been applied in the instance of high vowel deletion in Old English in works including Bermúdez-Otero (2005: §7.4), Hogg (2000) and Bermúdez-Otero & Hogg (2003). The stochastically overlapping constraints are indicated with a double border and shading (PARSE- $\check{\sigma}$  and MAX-V being affected here, leading to variation):

#### (8.15) Early West Saxon: Class 1 *-ed* forms

base + /-ed-/ +	MAX-V <sup>2</sup>	STRESSWELL	PARSE- $\check{\sigma}$	MAX-V	PARSE- $\sigma$
/e/ li:ev+ed+e					
[ <sub>ω</sub> [.li:e.].ve.de.]			**!		**
[ <sub>ω</sub> [.li:ef.].de.] $\nabla$			*	*	*
[ <sub>ω</sub> [.li:e.].ved.∅]		*!		*	*
[ <sub>ω</sub> [.li:ef.].∅d∅]	*!			**	

As shown in tableau (8.15), the *-ed* forms demonstrate syncope that is caused by the same phonological motivation as that found in nouns and adjectives, that is, the need to remove unstressed light syllables that cannot be parsed as feet. As far as the placement of deletion is concerned, I follow Bermúdez-Otero (2005) in assuming that syncope is favoured over apocope due to the medial vowel's location within a stress well. Within the weak verbs of Early West Saxon, we also have a phonological

condition that must be taken into account. Although only variable, it appears to be the case, similarly to the weak pasts, that [DəD] constructions are penalised, hence, the \*[DəD] constraint needs to be added to the constraint hierarchy, above MAX-V, where it will allow vowels to be deleted in order to prevent such constructions. \*[DəD] need not dominate MAX-V<sup>2</sup>, because although forms such as uninflected *sended* may show overapplication of deletion: *send*, there is no need to allow an inflected form such as *send+ed+e* to undergo deletion twice, as the constraint is satisfied by *sende* just as much as by *send*. As stated in Chapter 7, the proposed constraint follows Suzuki's (1998: 42) Generalised OCP formulation. I do not assume that the resulting geminate stops violate the OCP, since they represent one closure period with two moras, rather than two adjacent segments. Also relevant is MAX-C, and the following constraint:

(8.16)

\*VCCC          No superheavy codas

Although the prosodic vowel deletion constraint ranking can force deletion after heavy syllables, the *t/d* forms show deletion in any case. The HVD constraints have therefore been left out of the following tableau in order to make space for the higher-ranked constraints relevant to *t/d* forms.

(8.17) *Early West Saxon: Class 1 -ed forms*<sup>42</sup>

(a)

base +/ed/+/e/ send+ed+e	MAX-V <sup>2</sup>	*VCCC	*[DəD]	MAX-C	NOGEM
[ <sub>ω</sub> [.sen.].de.de.]			*!		
[ <sub>ω</sub> [.send.ø]de.]		*!			*
[ <sub>ω</sub> [.sen.].ded.ø]			*!		
[ <sub>ω</sub> [.send.ø]dø]	*!	*			*
[ <sub>ω</sub> [.sen.].døø]	*!			*	
[ <sub>ω</sub> [.sen.ø].de.] <sup>☞</sup>				*	

(b)

base +/ed/+/e/ hy:d+ed+e	MAX-V <sup>2</sup>	*VCC C	*[DəD]	MAX-C	NOGEM
[ <sub>ω</sub> [.hy:~].de.de.]			*!		
[ <sub>ω</sub> [.hy:d.ø].de.] <sup>☞</sup>					*!
[ <sub>ω</sub> [.hy:d.].ded.ø]			*!		
[ <sub>ω</sub> [.hy:d.ø]dø]	*!				*
[ <sub>ω</sub> [.hy:~] ødø]	*!			*	
[ <sub>ω</sub> [.hy:~ø].de.]				*!	

As this tableau shows, *sende* would be the harmonious outcome without the need for \*[DəD], which is exactly what we want to predict, as *send*, being a heavy stem, should undergo syncope in any case. However, syncope is variable to an extent within the grammar, and the addition of \*[DəD] to the hierarchy means that when syncope fails, a form ending in a dental stem will still not fail to emerge deleted. It is, of course, the light and/or uninflected stems within which the effects of \*[DəD] are most obviously seen, as these are the forms in which high vowel deletion should not

<sup>42</sup> In order to make the effect of STRESSWELL clear, I have indicated vowel deletion sites with ø. Geminate simplification has not been marked in the same way.

apply. As we have seen, uninflected, as well as light inflected forms do indeed undergo deletion after *t/d* roots. I will now apply the same constraint hierarchy to the uninflected input *send+ed*:

(8.18) *Early West Saxon: Class 1 uninflected -ed forms*

base + /-ed-/ send+ed	MAX- V <sup>2</sup>	*VCCC	*[DəD]	MAX-C	NOGEM
[ <sub>ω</sub> [.sen.].ded.]			*!		
[ <sub>ω</sub> [.send.]d]		*			*
[ <sub>ω</sub> [.sen.]d]    ɹɛ]				*	

Tableau (8.18) shows that when the prosodic constraints enforcing high vowel deletion are irrelevant, \*[DəD] forces deletion by penalising the /dəd/ construction. This analysis captures the additional phonological conditioning effectively, without making predictions that are unattested. Non-dental uninflected forms remain, of course, unaffected by this.

This analysis, which can account for the combination of weight-based syncope in weak forms within Early West Saxon with additional dental conditioning, is partly applicable to the Lindisfarne Gospels. The basic constraint ranking seen in tableau (8.18) will enforce the variable deletion within heavy stems. The only difference is that the dental conditioning does not affect past participles in Lindisfarne, and as such, \*[DəD] does not need to be ranked highly enough to cause overapplication.

Tableau (8.18) also correctly rules out any VCCC constructions caused by the resulting geminates. Geminate simplification proceeds to prevent \**sendd*. However, the tableau is over simplified, and does not adequately represent the fact that although VCCC is prevented by degemination almost obligatorily (with one single token as exception), V:+gem and V+gem forms show variable geminate simplification. A further complication is that, when inflected, the V:+gem and V+gem forms do not allow geminate simplification, with *sette*, or *lædde* being the only possible outcome. I will firstly deal with the uninflected forms, which show variable deletion in satisfaction of \*[DəD], with variable geminate simplification

after vowels, but obligatory degemination after consonants. Instead of using \*VCCC]P<sub>Wd</sub>, which runs into problems when faced with forms such as *gemengde*, I will instead use the more general constraint banning trimoraic feet:<sup>43</sup>

(8.19)

\*μμμ (Prince & Smolensky 1993: 210)

Syllables are maximally bimoraic.

In a form such as \**sendd*, degemination can proceed to prevent the trimoraic syllable. However, a form such as *drincǝ* ‘drinks’ is not permitted to undergo deletion in order to prevent the same prosodic construction. Therefore, MAX-V must be ranked above \*μμμ, but \*μμμ must be higher ranked than MAX-μ, in order to allow geminate simplification:

(8.20) MAX-μ (McCarthy 2005b: 9)

Every input mora has an output correspondent.

(8.21) MAX-μ<sub>V</sub> (Davis and Torretta 1998)

Every vocalic input mora has an output correspondent.

(8.22) MAX-μ<sub>C</sub> (Davis and Torretta 1998)

Every consonantal input mora has an output correspondent.

\*μμμ is therefore undominated in forms within which a geminate can be reduced in order to prevent the superheavy syllable.

---

<sup>43</sup> *gemengde* of course also violates this constraint, but the repair strategy is limited to degemination, rather than consonant deletion. Also, \*VCCC]PWd is unable to contribute to the variable reduction of geminates after long, but vocalic rhymes.

(8.23)

Uninflected forms		MAX C	*μμμ	MAX-μ
<i>sendd</i>	[ <sub>ω</sub> [.sen.]d] $\nabla$			*
	[ <sub>ω</sub> [.send.]d]		*!	
<i>drincđ</i>	[ <sub>ω</sub> [.drink.]θ] $\nabla$		*	
	[ <sub>ω</sub> [.drin.]θ]	*!		

The inflected forms like *send* can be accounted for in a similar way, as gemination is prevented by the same constraint:

(8.24)

Inflected past participles		MAX C	*μμμ	MAX-μ
<i>send+de</i>	[ <sub>ω</sub> [.sen.].de.] $\nabla$			*
	[ <sub>ω</sub> [.send.].de.]		*!	

However, we are left with the problem that vocalic roots, whether heavy or light, allow gemination when inflected, but variably prevent it when uninflected. The prevention strategies are argued to be a) variable failure to delete the vowel in satisfaction of \*[DəD], and b) variable degemination. The third option, c), is the permission of final geminates, e.g. *lædd*. In contrast to the analysis by Minkova (2012), I will argue, following Pająk (2010), that the NoGem constraint should be split into a set of constraints. Relevant to this analysis is the \*G<sub>EM</sub>/IVA constraint, that penalises geminates that are not intervocalic:

(8.25)

\*G<sub>EM</sub>/1VA (Pajak 2010: §2)

Geminates adjacent to exactly one vowel are not allowed.

In uninflected forms, this, stochastically ranked with MAX-μC (no degemination), and \*[DəD], will predict the correct outcome, which is that *gelædd*, *gelæd* and *gelæded* will all surface:

(8.26)

Uninflected forms		*μμμ	*[DəD]	*GEM/1VA	MAX-μC	MAX-μV <sup>44</sup>
<i>send+ed</i>	[ <sub>ω</sub> [.sen.]d] <sup>☞</sup>				*	*
	[ <sub>ω</sub> [.send.]d]	!*				*
	[ <sub>ω</sub> [.sen.].ded.] <sup>☞</sup>		*			
<i>læd+ed</i>	[ <sub>ω</sub> [.læ:d.]d]	*!		*		*
	[ <sub>ω</sub> [.læd.]d] <sup>☞</sup>			*		**
	[ <sub>ω</sub> [.læ:.]d] <sup>☞</sup>				*	*
	[ <sub>ω</sub> [.læ:.].ded.] <sup>☞</sup>		*			
<i>set+ed</i>	[ <sub>ω</sub> [.set.]t] <sup>☞</sup>			*		*
	[ <sub>ω</sub> [.set.]] <sup>☞</sup>				*	*
	[ <sub>ω</sub> [.se.te.]d] <sup>☞</sup>		*			

This models the variation correctly, though note that there is a prediction made by this analysis that is not uncontroversial: root vowel reduction is predicted as an alternative to degemination in *lædd*, as opposed to *lædd*, which is outlawed. This of course does not affect the already short *sett*, or the heavy *send*, which is heavy due to the coda, rather than vowel length. We therefore, in the case of *lædan* ‘lead’ have the following possibilities: *læded*, *lædd*, and *læd*. Under this analysis, \*μμμ must be

<sup>44</sup> This constraint penalises not only vowel shortening, but vowel deletion.

undominated or *\*sendd* would occur, but this also rules out *lædd*. I will discuss the implications of this tentative analysis, as well as potential evidence and alternatives. Firstly, I will show how this analysis deals with the inflected forms. Recall that for the inflected forms, the variation is unwanted, and forms always surface as *sende*, *sette* and *ladde*, respectively.

(8.27)

Inflected forms		*μμμ	*[DəD]	*GEM/IV A	MAX- μC	MAX-μV
send+ed+e	[ <sub>ω</sub> [.sen.].de.] ㄟ				*	*
	[ <sub>ω</sub> [.send.].de.]	*!		*		*
	[ <sub>ω</sub> [.sen.].de.de.] ㄟ		*			
læ:d+ed+e	[ <sub>ω</sub> [.læ:.].de.de.]		*			
	[ <sub>ω</sub> [.læd.].de.] ㄟ					**
	[ <sub>ω</sub> [.læ:d.].de.]	*!				*
	[ <sub>ω</sub> [.læ:.].de.]				*	*
set+ed+e	[ <sub>ω</sub> [.set.].te.] ㄟ					*
	[ <sub>ω</sub> [.set.].e.]				*	*
	[ <sub>ω</sub> [.se.te.].de.]		*			

The constraints that vary stochastically (Boersma 1997, 1998; Boersma & Hayes 2001), correctly predicting the variation in the uninflected forms, do not predict such variation in the inflected past participles. In any order, the overlapping constraints predict [<sub>ω</sub>[.læd.].de.] and [<sub>ω</sub>[.set.].te.]. Seemingly problematically, the tableau does predict a two-way variation in the case of *send*: *\*[<sub>ω</sub>[.sen.].de.de.]* and the attested [<sub>ω</sub>[.sen.].de.]. However, this problem is not as serious as it appears, since the inflected *send+ed+e* is subject to HVD, which removes the possibility of



[<sub>ω</sub>[.sen.].de.de.]. In terms of the stochastically varying constraints, the following diagram depicts their interaction:

(8.28)



As stated above, this allows *lædd~lǣd~lǣded*, and *set~sett~seted* to surface, but prevents *sendd*. I will now return to the implication made by this analysis, which is that long vowels may shorten in order to prevent superheavy syllables in OE. It is well-known that this process takes place by at least Middle English, but the assumption that is often made is that within OE, forms such as *lǣdd* are perfectly grammatical (e.g. Lahiri 2009: fig. 15), in which *fēdde* ‘fed’ in the pret. is assumed to endure into Early Middle English, with *fedde* occurring only in Late Middle English). The effects of the shortening, whenever they occurred within the history, can be seen in the PDE reflexes. Compare, for example, *to lead* [i:], which displays the effects of the Great Vowel Shift, and *the horse was led* [ɛ], which is short, and has not shifted. The same can be seen with, for example, *feed* and the past participle *fed*. On the other hand, *send*, which in OE was a short vowel, has not changed in vowel quality. It has also been argued that the shortening did occur in (Late) Old English (e.g. Eliason 1948: 17). The Early Middle English *Ormulum* contains the form *ledd*, for example: *wass ledd ut inntill wessteland* (line 11405, White 2004, also on 11321). Orm’s spelling system indicates vowel length using doubled consonants. Thus, Orm indicates that *led* in his Early Middle English dialect was indeed short. This adds to the evidence that the process was not Late Middle English. The question remaining is whether it is plausible to assume that the process was underway within Early OE. The behaviour of the EWS texts suggests that this is the case. Old English, as stated above, does not prefer superheavy feet, and yet *send+d* and *lǣd+d*, which are both treated equally as ‘heavy’ by prosodic processes such as HVD behave completely differently in terms of gemination reduction. This problem can be solved, as in analysis (8.34), by assuming that the long vowel is reduced in

preference to degemination. This causes no problems as far as HVD is concerned, since the form is still long, and in any case has lost the vowel that would be targeted. It would also be possible to predict this imbalance of variation by further dividing the anti gemination constraint. In addition to \*GEM/1VA, which (variably) prevents *lædde*, the stronger, and universally higher ranked (Thurgood 1993) \*GEM/NVA could dominate the hierarchy. This would prevent *sendd* in order to prevent a geminate that is not adjacent to a vowel. Problematically, though, the prevention of \**sendde*, when inflected, would rest upon \*GEM/1VA, which is stochastically ranked. This would mean that although the variation in the uninflected forms could be successfully modelled, the inflected root-final vocalic forms would be correctly modelled, but inflected *send+de* would be predicted to show competition between *sendde* and *sendd*. I will argue instead that shortening of stressed vowels in order to prevent superheavy feet, though variable, is in evidence even in Early Old English.

#### 8.5.4. Summary of the findings and analysis

The weak past participles have been shown throughout this section to have a complex relationship with high vowel syncope and other phonological conditioning, which can be summarised as follows:

- Syncope is active in the participles in both *Li.* and EWS, and correlates with the weight of the preceding syllable. Forms that are expected to be targeted by syncope, however, are affected variably.
- Syncope is subject to additional phonological conditioning within Early West Saxon. Sensitivity to root-final dentals in the case of the *-ed* participles is evident. Overapplication can be forced by a pressure to remove [DəD] constructions. This pressure appears to have emerged only within the morphological categories within which high vowel deletion is active. Though there are not many *ded* forms within Class 2, due to the usual formative being *-o-* or *-a-*, the few that exist show no evidence of deletion in order to satisfy \*[DəD], e.g. *ðæs gewundedan CP (H) 457.16*. These forms, though, have not

been included in the data tables above as they do not show deletion. To model this synchronically, I assume that MAX- $\acute{V}$ , which was discussed in Chapter 7, prevents any deletion of vowels that are marked as heading a foot. This is ranked above \*[DəD], meaning that deletion does not apply in the Class 2 *t/d* forms.<sup>45</sup>

- Degemination is shown to be variably sensitive to syllable well-formedness constraints, and alternative strategies include the shortening of the root vowel before the heavy coda.
- Syncope is sensitive to morphology, occurring less frequently in the nom.sg.fem. and the nom/acc.pl.neut. regardless of the phonological environment.

These points illustrate how rich the interaction of syncope with phonology and morphology is in the participles. Participles are formed from verbs, but decline like adjectives, and appear to show a relationship with syncope that is distinct from either category. Like verbs, they allow relative freedom for syncope in exhibiting deletion in closed environments with an adjacent dental. Of particular interest is the fact that an additional phonological condition has emerged as well as morphological conditioning. According to Anttila (2002: 9) circumstances in which an active phonological process is weakened may give rise to the *emergence of phonology* and the *emergence of morphology*. This point will also be relevant in the next section in the discussion of the strong past participles and non-high vowel deletion, in which it is argued that instead of non-high vowel deletion, a completely separate phonological condition has emerged.

---

<sup>45</sup> The reduction of the -o- Class 2 thematic vowel to -e-, as well as its synchronic short quantity suggest that this constraint does not prevent the reduction or shortening of foot heads, preventing only deletion. Thus, this top-ranked constraint is not violated by the shortening within *lædd* 'led'.

## 8.6. NON-HIGH VOWEL DELETION AND THE STRONG -EN FORMS

### 8.6.1. *The original conditions for non-high vowel syncope*

According to the handbook accounts, non-high vowels in open syllables face deletion, though this is affected by ‘analogical’ processes. In this section I will recapitulate the OT analysis presented in 2.5 for non-high vowel deletion, as described in the handbooks. After the data have been presented, I will discuss the validity of this analysis, together with the analogy interference assumption.

Recall that according to Hogg (1992), N-HVD applies in any environment, after heavy and light stems, except within closed syllables. Therefore, the motivating constraint for HVD, PARSE- $\check{\sigma}$ , must be lower ranked in the strong past participles, as the removal of unfooted syllables cannot be the motivation, since a form such as [o[.bro.ke.]ne.] does not present an unfooted medial syllable to face deletion, and yet, as the handbooks state, deletion is still expected to apply. Note that if the analysis stipulated that PARSE- $\check{\sigma}$  only affects historically high vowels, there would be no need for it to be demoted in the strong past participles. However, that is not the solution that is proposed here, since a), there is no synchronic evidence to suggest that in the dialects under consideration a height condition endures, and b), it will be argued that due to opacity created by lowering processes, the historically high environments have been reanalysed as being morphological environments.

It is clear that the traditional description of non-high vowel deletion also has a prosodic motivation, however, since closed syllables are reliably exempt from deletion. The constraints that are involved in non-high vowel deletion were proposed in Chapter 2 to be  $**\check{\sigma}$  and STRESSWELL (Bermúdez-Otero 2005: §7.6)

With these two constraints ranked above Max-V, but PARSE- $\check{\sigma}$  ranked below, syncope is permitted to prevent any monomoraic syllable, with deletion targeting vowels that are adjacent to a stronger prosodic unit. As opposed to the use of STRESSWELL to cause removal of the vowel after a foot, as found in (Bermúdez-Otero 2005: §7.6), the analysis for non-high vowel syncope assumes a stressed syllable to be the trigger. I repeat here the ranking suggested in 2.5:

(8.29) MAX-V2 >> STRESSWELL >> \*\*Ǿ >> Max-V >> PARSE-Ǿ

(8.30) Heavy uninflected

base + /-en/ bund+en	MAX-V2	STRESSWELL	**Ǿ	Max-V	PARSE-Ǿ	PARSE-σ
bund+en 𐀀𐀁						*
bund+n				*!		

(8.31)

(a) Heavy inflected

base + /-en/ + /e/ bund+en+e	MAX-V2	STRESSWELL	**Ǿ	Max-V	PARSE-Ǿ	PARSE-σ
bund+en+e			**!		**	**
bund+n+e 𐀀𐀁𐀂			*	*	*	*
bund+en		*!		*		*
bund+n	*!			**		

(b) Light uninflected

base + /-en/ broc+en	MAX-V2	STRESSWELL	**Ǿ	Max-V	PARSE-Ǿ	PARSE-σ
broc+en 𐀀𐀁						*
broc+n				*!		

(c) Light inflected

base + /-en-/ + /e/ broc+en+e	MAX-V2	STRESSWELL	**ǫ	Max-V	PARSE-ǫ	PARSE-σ
broc+en+e			**!		*	*
broc+n+e <sup>☞</sup>			*	*	*	*
broc+en		*!		*		
broc+n	*!			**		

With this ranking, it is possible to predict the handbook account, with syncope removing monomoraic syllables occupying a stress well. The tableaux correctly assume no difference in the outcome between light and heavy stemmed forms, and correctly predict that uninflected forms will be unaffected. This analysis can describe the process as outlined in the handbooks, but it is not possible to claim that it is active in Early West Saxon or Lindisfarne past participles without examination of the data, which will be the focus of the next sections.

### 8.6.2. The EWS inflected<sup>46</sup> strong past participle in -en

As explained in the introduction to the chapter, the vowel of the strong past participle ending -en is historically non-high. Therefore, according to traditional accounts, it should not be a target for high vowel syncope, but should undergo non-high, and therefore, non-weight conditioned syncope in all forms inflected with vowel-initial adjectival suffixes. However, although Wright & Wright (1925: §483) outline the history of the vowel, the situation regarding -en participles taking adjectival suffixes is not made clear. About the past participle, Wright & Wright (1925: §442, with my additions within brackets) state that “*When strong (in terms of adjectival inflection) it (the past participle) was declined like manig or hālig... according as the stem-syllable was short or long; and similarly when it was declined weak (in terms of adjectival inflection)*”. Since *manig* ‘many’ has a short root syllable, it would not

<sup>46</sup> I have not listed the data tokens for the uninflected strong past participles in Early West Saxon or Lindisfarne as they show no overapplication of syncope.

undergo syncope, whereas *hālig* would syncopate regularly. Unless one assumes that Wright & Wright refer here only to the weak *-ed* participles, this statement does not represent the data within Early West Saxon. To complicate matters, however, there was an alternative historical form. Wright & Wright (1925: §483) also note the following:

“Beside the suffix *-ēno-*, *-ōno-* there also existed in prim. Germanic *-ini-* = Indg. *-ēni-* which was preserved in a few OE. past participles with umlaut in the stem-syllable, (see § 442). Prim. Germanic *-ēnaz*, *-īniz* = Indg. *-ēnos*, *-ēnis* regularly fell together in *-en* in OE., but they were still kept apart in the oldest period of the language, the former being *-æen* (*-en*) and the latter *-in*.”

Wright & Wright (1925: §483)

Hogg & Fulk (2011: §6.29) also note the existence of two ancestor suffixes, one of which, *\*-in*, could cause umlaut in certain words. The possibility that this could lead to high vowel deletion is not discussed. Hogg & Fulk (2011: §4.54) assume that non-high syncope, however, applies in Early West Saxon, noting that “[i]n EWS texts [...] syncope is found in a significant minority of examples...”

We are therefore left with a complex picture, in which a historical suffix that would be affected by high vowel syncope merges with a historical suffix that would block HVS, but should be subject to N-HVS. I will now present the data for the strong *-en* past participle, with a view to revealing whether there is any active weight-conditioned high vowel syncope.

### (8.32) *Weight conditions for the strong -en participles*

Inflected <i>-en</i> past participles in EWS (strong and weak adj endings)	Total	Syncope	% syncope
Light	169	1	0.6%
Heavy	109	46	42%

The situation is, as stated in Hogg & Fulk (2011: §4.54), that syncope is less widely found in the past participles than in other adjectives. However, as they also state, syncope does indeed occur in a ‘significant minority’. This description, though,

refers to N-HVD, which is not weight conditioned. In contrast, there is a healthy weight condition in the EWS strong past participles, and a chi square test affirms that the difference in the rate of syncope between heavy and light stems is significant ( $X^2=81.67$ ,  $P=<.0001$ ). The process is variable, affecting 42% of heavy forms, similarly to that found in the weak past participle. The exact nature of this weight condition will be examined in detail later in this chapter, where I will provide the analysis, and determine the extent to which high vowel deletion is truly active in the strong past participles. In addition to the spread of HVD to the strong past participles, we must also consider another issue, which is that light stems failing to undergo N-HVS represent apparent underapplication. The data here indicate that N-HVD is no longer in the grammar, but that HVD has taken over. When a phonological process is at this stage of robustness, in which the original phonological conditions are still relevant, but fail to trigger the process in the majority of tokens, it presents the perfect circumstances for morphologization, phonologization and eventually, rule death. I will also consider the possibility of other phonological conditioning in the strong past participle, and will show that the nature of the root-final consonant also influences the outcome of deletion. The standard descriptions of N-HVD and HVD do not make reference to the nature of the stem final consonant with respect to non-high vowel deletion in the strong past participle. Syncope is instead described in terms of the stress, length and quality of the target vowel, with the requirement that it is within an open syllable. The following table provides a snapshot of this relationship in the past participles of Early West Saxon.



(8.33) EWS strong heavy past participles (with strong and weak adjectival inflections)<sup>47</sup>

<i>Consonant type</i>	<i>stem final cons</i>	<i>number of tokens</i>	<i>number syncopated</i>	<i>percentage syncope</i>
<i>Sonorant</i>	<i>w</i>	3	0	0%
	<i>l</i>	3	0	0%
	<i>n</i>	5	0	0%
<i>Fricative</i>	<i>f</i>	3	0	0%
<i>Cluster</i>	<i>ks</i>	3	1	33%
<i>Stop</i>	<i>g</i>	16	12	75%
	<i>d</i>	34	15	45%
	<i>k</i>	7	6	78%
	<i>t</i>	20	1	5%
	<i>p</i>	15	11	73%
<i>Total</i>		109	46	42%
<i>Total stops</i>		92	45	49%

The situation represented in this table is that although syncope may fail in the environment of any root-final consonant, it may only apply in heavy forms with a stop, for example *aworpna* ‘cast off’ *CP (H, C) 357.23*, compared to obligatory lack of syncope in, for example, *acorfena* ‘carved’ *Or. 160.15*. We have a situation in which non-high vowel syncope is either blocked for some reason in non-stop forms, or is forced in stop forms. In the later analyses, I will investigate further the possible relationship between epenthesis and syncope. I will also investigate the exact nature of the phonological conditioning in the past participle, incorporating it into the phonological analysis.

<sup>47</sup> The stop+*en* and non-stop+*en* light forms have been separated in Appendix C, but since the light forms do not show syncope in EWS in either category, they have not been included in this table.

### 8.6.3. Strong past participles in -en in Li.

As we have just seen with respect to the strong past participles in EWS, a complication arising in this class is that unlike the *-ed* participles, the participles ending in *-en* result in consonant+sonorant clusters when undergoing syncope. Like the EWS dental conditioning in the weak past participles, there appears to be, in EWS, additional phonological conditioning within the strong forms. Before moving on to the question of whether this root-final stop conditioning comes into effect in the *Li*. strong past participle, I will first present the numbers for the light and heavy forms, in order to see whether any weight conditioning has come to affect these historically non-high vowels. The following data tables show the rates of deletion, together in light and heavy forms.

#### (8.34) Inflected past participles in -en in Li

	Total	Number syncopated	% Syncopated
Light past participle inflected forms in -en	70	21	30%
Heavy past participle inflected forms in -en	63	28	44%

The distinction between the rates of syncope in the light and heavy inflected *-en* past participles is not statistically significant ( $X^2=2.97$ ,  $P=0.084822$ ). There is an additional complication when we look at the consonant+sonorant clusters that are formed through syncope. When we look in closer detail at the heavy inflected forms, we see an interesting distribution of root-final consonants:<sup>48</sup>

---

<sup>48</sup> Apart from the single unsyncopated form, *forblāwa* ‘blow’ dat.sg.masc. *f’blauene* Jn(Li). 6, 18, all forms are stop-final.

(8.35) *Distribution of root-final consonants in heavy past.parts.*

Root-final *t*: f'leteno ~ f'letno

Root-final *d*: gewordeno ~ gewordne

Root-final *k*: druncene ~ druncnu(m)

Root-final *g*: ablonegene ~ ablonegne

It is difficult, within the target heavy forms, to ascertain what the effect of the root-final cluster is, since all but one of the tokens are root-final stops. However, the light forms shine some light on the situation, as we have a more diverse distribution of root-final consonants. It is clear, in the case of the strong past participles that analogy is not responsible, and that the nature of the root-final consonant is of great consequence:

(8.36) Light infected past participles in -en, arranged according to the root-final consonant

Consonant type	Root final cons	Number of tokens	Number syncopated	Percentage syncope
Sonorant	r	2	0	0%
	m	9	0	0%
	j	7	1	14%
Fricative	f	7	0	0%
Palatalised	tʃ	1	0	0%
Stops	d	11	8	73%
	k	3	0	0%
	t	27	12	44%
	p	2	0	0%
Total stops		43	20	47% of all stops syncopated
Total non-stops		26	1	4% of non-stops syncopated

When the root-final consonant is taken into account, a striking pattern emerges, with syncopated forms being limited, with only one exception,<sup>49</sup> to those ending in a stop. The heavy forms almost all end in stops, and instances of syncope in the light forms is limited to stops. Although the weight distinction was shown not to be statistically significant, we find that when comparing *stop+en* forms, heavy and light, the significance of syllable weight is further diminished:

<sup>49</sup> The exception is *unðuegnum* Mk(L). l 3, 14, which is likely to represent the merging of the highly sonorous [j] with the vowel.

### (8.37) Weight comparison: stop-final forms only

-en forms	Total	Syncopated
Light: root-final stops	43	20
Heavy: root-final stops	61	28

When these numbers are subjected to a *chi-square* test, the result indicate that no statistically significant weight condition exists ( $X^2=0$ ,  $P=1$ ). In start contrast to EWS, we are therefore not witnessing the results of the extension of weight-conditioned high vowel deletion to historically non-high forms in *Li*. The failure of *corene* to syncopate discussed in Campbell (1959: §343) can be described as the result of a clear and phonetically motivated process. The analogy description is clearly unexplanatory, since it a) does not account for the differences in behaviour between weak and strong participles, both of which have salient unsyncopated uninflected forms that could be possible bases for analogy, and b) analogy is not an adequate account for a process that is phonologically motivated.

#### 8.6.4. Analysis of the strong -en forms

On the basis of the data presented in this chapter, it is argued here that the original conditioning for non-high vowel deletion is not active in the dialects under consideration, and thus, the analysis proposed for non-high vowel deletion is not assumed to be correct without amendment for EWS and *Li*. This is due to the fact that in EWS, weight and stop conditioning is responsible for the occurrences of deletion, and in Lindisfarne, the stop conditioning alone is responsible.

We have seen that the rates of deletion are highly variable, and it would be possible to model this level of variation stochastically by assuming that the ranking values of **\*\*Œ** and MAX-V overlap. However, this fails to capture a crucial fact about the grammar of both EWS and *Li*: syncope only applies in the instance of a root-final stop. This is not merely to say that deletion is more likely after root-final stops, but that it may only apply in such conditions. The tableaux therefore incorrectly predict

that a form such as *coren+e* would undergo deletion, which does not happen. This is highly problematic, as the ranking is therefore seen to be inactive within the ‘elsewhere’ environment. It will be argued that this ranking is in fact not responsible for the alternations in question, and that the root cause can be found in the root-final stop conditioning.

#### 8.6.4.2. Root-final stop conditioning

The strong past participles have presented a set of alternations that indicate that non-high vowel syncope has developed sensitivity to the root-final consonant. In this section, this conditioning will be discussed in more detail. The following points summarise the relevant issues in the strong past participles:

- In West Saxon there is a weight condition, indicating that high vowel deletion has come to affect the strong past participles. This contradicts the descriptions of the past participle, and non-high vowel deletion found in the handbooks.
- In Lindisfarne there appears on first examination to be a weight condition, but it is likely that this is in fact an illusion, created by the higher numbers of root-final non-stops within the light forms.
- There is an additional phonological condition in both dialects, causing deletion only to apply in the instance of a stop. This gives rise to the question of how such a motivation can be accounted for phonologically.
- Deletion after root-final stops creates an obstruent+sonorant cluster: [d/t+n]. In light forms,<sup>50</sup> this cluster constitutes a syllable contact law violation (Vennemann 1988), indicating that contact laws are not of great consequence in Northumbrian Old English.
- In the majority of vowel-less forms within Lindisfarne, *n* follows the coronal consonants *t* and *d*. Early West Saxon does not show this pattern, with *p* triggering syncope. Therefore, I assume that the manner of articulation is the main factor, but suspect that more specifically, homorganic stops + *n*

---

<sup>50</sup> Heavy forms with a root-final consonant that cannot move to the following onset may also provide a CONTACT violaton, e.g. *bund.ne* \*bun.**dne**.

clusters lead to vowel-less forms in Lindisfarne (for a similar phenomenon in PDE, see Toft 2002: 117).

The two dialects, therefore, present different patterns, with different implications for the phonological processes involved. For EWS, I assume that PARSE- $\text{Ǿ}$ , the motivating constraint for HVD, is responsible for the variable syncope in inflected *-en* participles. The final stop conditioning is therefore weaker than in Lindisfarne, but appears to be emerging as a tendency. In contrast, the Lindisfarne gospels appear to be conditioned only by the root-final stop, without the need for PARSE- $\text{Ǿ}$  or  $\text{**Ǿ}$  as prosodic motivation. I will now look more closely at the conditioning in Lindisfarne.

When undergoing deletion, the resulting *-en* past participle forms involve obstruent+sonorant clusters, which are either split between syllables, e.g.  $[\text{ǽ}[\text{.bund.ne.}]]$ , or fully shifted into the onset of the syllable containing the inflexion. The forms in which the cluster becomes an onset cluster are relatively rare as the onset can only claim the cluster if a) the stem syllable is heavy, and b) the resulting onset cluster is phonotactically allowed. The majority of remaining stop+/n/ clusters resulting from deletion are syllabified as such:  $[\text{ǽ}[\text{.bund.ne.}]]$ .

When we compare the behaviour of stop+/n/+morpheme boundaries in Present-Day English to the Old English pattern it becomes clear that this is an instance in which the present phonological processes may help in our understanding of those from the past (Labov 1978: 308). Present-Day English also has alternations between schwa and  $\text{ǽ}$  in the instance of final obstruent+/n/ clusters, for example in Southern British English *button*  $[\text{bʌtn}]$ . When a morpheme boundary follows, the nasal may also surface as syllabic, rather than with a vowel. This appears to follow a similar pattern to the Old English phenomenon: according to experimental data from Toft<sup>51</sup> (2002: 117), nasals were more likely to be syllabic after the coronal plosives /t/ and /d/ than the non-coronal stops /p/, /b/, /k/ and /g/. The non-coronal examples from the Lindisfarne data were not numerous enough to make any firm assumptions, and nor were there any non-stop coronal sibilants for the purpose of comparison. The data do suggest, however, that the occurrence of a stop is a deciding factor, and the

---

<sup>51</sup> Toft (2002) also discusses //, which she argues behave differently from /n/ in Present-Day English. Since Old English strong past participles only present *-en/-n*, I do not discuss the behaviour of // here.

majority of relevant forms are coronal stops. Furthermore, Giegerich (1999: 67) discusses the Present-Day English alternation between forms such as *lightning* and *lightening*, in which a /t+n/ cluster is neither syllabic nor schwa inclusive (i.e. the form is disyllabic rather than trisyllabic). The *light+en+ing* forms that are reduced to two syllables are those with less overt internal morphology, with syllabic /n/ appearing in those lexical items such as the progressive verb *lightening*, and not appearing in the noun *lightning*. We therefore, in Present-Day English, have three variable ways of syllabifying stop+/n/ clusters followed by a morpheme boundary: a) non-syllabic, non-vocalic *lightning*, b) syllabic, non-vocalic *buttoning*, *lightening* c) vocalic (schwa) *livening*. In Old English, I assume that the nasals are non-syllabic, being syllabified as such: [ω[.bund.].num.]. This motivation has the benefit of being mirrored by attested phenomena in Present-Day English, and represents a natural phonologically motivated process. In articulatory terms, a sonorant consonant that is preceded by a homorganic stop can, depending on certain external factors (such as register, according to Roach, Sergeant and Miller 1992), follow on directly without the articulators moving into the relaxed schwa position. Additionally, the syllabication process is variable, affecting approximately 50% of the Lindisfarne stop+-*en* forms. This variability is also attested in the Present-Day English stop+/n/ forms. Future study may reveal whether the extra-linguistic factors that influence this process in Present-Day English also apply in Old English (Toft 2002: 113). Word frequency, for example, as well as register, may well be possible factors.

It is well documented (see for example, Campbell 1959, Bermúdez-Otero 2005, Minkova 2012 among others) that underlying obstruent+sonorant clusters are significant with respect to the phonology of Old English. For example, monosyllabic nouns and adjectives with underlying obstruent+sonorant clusters undergo schwa epenthesis: e.g. *wæter* /wætr/ ‘water’, though inflected forms are not required to undergo epenthesis, as the final cluster is able to be split across the syllable boundary: e.g. gen.sg. [ω[.wæt.re.].s] This process is described in the handbooks, and is commonly referred to as *parasiting*. In the nouns of West Saxon, Bermúdez-Otero (2005: §7.7) documents a case of apparent overapplication of parasiting, in which light stemmed forms ending in an obstruent+sonorant cluster undergo epenthesis when inflected: [ω[.wæ.te.].res.]. This, he concludes, is the result of a repair process



for the syllable contact in which the sonority contour rises across the syllable boundary (Vennemann 1988). Bermúdez-Otero (2005: §7.7) finds that it is particularly in forms with a high sonority discrepancy that such epenthesis applies, providing evidence for strong adherence to syllable contact laws in West Saxon. The strong past participle phenomenon we have observed in Lindisfarne contrasts the process of syllable contact motivated epenthesis described in Bermúdez-Otero (2005: §7.7) in relation to West Saxon nouns. The preferred [ω[.bund.ne.]]<sup>52</sup> displays a marked rise in the sonority across a syllable boundary, to a greater extent than the non-stop form \*[ω[.drif.ne.]]. It would seem to be the case, therefore, that syllable contact laws are not strongly of consequence in Lindisfarne. However, contact laws have been argued to have some effect in EWS nouns, and the possibility that they influence the alternation within EWS strong past participles must be considered.

#### 8.6.4.3. CONTACT and the strong -en forms in EWS

The past participles in *-en* display rather different characteristics in EWS to those in *Li*. However, the similarity is that both dialects display a choice between forms with and without a medial vowel, but only in words with a root-final stop. Both dialects, therefore, permit only disyllabic stem outputs in inflected forms lacking a root-final stop: *drīfene*. A crucial difference between *Li*. and EWS is that while *Li*. displayed no weight conditions, EWS showed a significant weight condition, with only one light token displaying syncope: *unforgifne* CP (C) 220.17 (1%), compared to 35% of heavy stems. The heavy stems show the same stop condition as *Li*., though the one token showing deletion in the light forms is in fact not a stop.

It does therefore appear to be the case that in EWS there is a weight-orientated process affecting the strong past participles, but that deletion is limited to forms ending in a root-final stop. One other factor that must be considered is the syllable contact issue. In *Li*., syllable contact repair is not shown to be evident in the verbs or in the nouns. The handbook accounts refer to EWS when discussing the ‘extension’ of parasiting, which is argued in Bermúdez-Otero (2005) to be the result

---

<sup>52</sup> Although contact laws are not usually relevant in the case of heavy stems, this token retains the rising sonority contour across the syllable boundary, as *\*dn* cannot form an onset.

of contact repair. However, if contact laws are playing a role in the behaviour of the past participles, they would militate against vowel-less forms that are light. Note that as CONTACT should only repair light forms such as [ɔ[.brɔk.].ne.], the resulting forms, with a medial vowel could present a situation in which heavy stems emerge with fewer medial vowels and light stems emerge with more forms such as *bundnum*. This could possibly contribute to the preference for medial vowels in light stems. This leaves the possibility that the weight condition that we have seen in EWS, which is absent from *Li.*, may actually be the result of contact laws, rather than the extension of high vowel deletion to the strong past participles. It is of course difficult to know from the surface data which analysis is correct, though it is worth noting that EWS does show evidence for the high ranking of CONTACT in nouns (Bermúdez-Otero 2005). This possibility, though worthy of consideration, is to be rejected. Since *\*dn* is not a possible onset, the prevalent syncopated forms such as *bundnum* do present a violation of CONTACT. Therefore, I conclude that high vowel deletion has indeed come to affect the strong West Saxon past participles. I argue, therefore, that in both of the dialects under investigation, non-high vowel deletion is no longer in place. In both dialects, a separate motivation has spread to the past participles; high vowel deletion in EWS, and stop conditioning in *Li.* The tableaux in Chapter 2, which represented the original conditions for non-high vowel deletion as described in the handbooks would incorrectly predict that a light form lacking a root-final stop *corene* would undergo deletion. Such forms are unattested, due to the root-final non-stop in *Li.*, and due to the light stem syllable in EWS.

#### 8.6.5. *Flaws in the non-high vowel deletion handbook account*

Both Campbell (1959: §343) and Hogg & Fulk (2011: §4.54) assume that the relative lack of syncope in past participles can be assumed to be the result of analogy. The basis for analogy is assumed to be the uninflected past participle, which is more common than the inflected forms. In terms of the weak past participles, the idea that the influence of the uninflected forms such as *līefed* would reduce the robustness of syncope in the inflected counterparts: *līefede*, as opposed to the weak preterite, in which HVS is more robust, makes sense. This does not contradict the description of

analogy that is assumed in this thesis, i.e. that analogy will be based on more simple forms, it will not be phonologically conditioned, it will bring the paradigm into uniformity and it will be based on a salient form. However, the analogy account found in the handbooks runs into serious problems when it comes to the *-en* forms. It is also assumed in the handbooks that *-en* forms lacking deletion are the result of analogy on the uninflected past participles. The problems with this are:

- This does not explain the significantly lower rates of deletion in the strong past participles compared to the weak ones, which, as discussed above, also have a salient uninflected form.
- This analogy account makes no provision for the stop conditioning.
- Finally, this account, from a Neogrammarian perspective, assumes that disturbance by analogy is the only factor preventing the forms from representing the outcome of non-high vowel deletion. Instead, it is argued here, that non-high vowel deletion has long since been lost from the grammar, and has been reanalyzed as a separate and active phonological process.

The present explanation, in contrast, has the benefits of describing synchronically why only stop-final forms appear vowel-less, without the need to stipulate that non-stop forms in particular are immune to deletion, or worse, to ignore the phonological conditioning. This description also presents interesting parallels between Old English sonorant conditioning and Present Day English conditioning.

#### *8.6.6. The demise of the prosodic conditions for non-high vowel deletion*

I will now briefly return to the OT analysis that was tentatively posited to describe non-high vowel deletion, as described in the handbooks. It was suggested that the following tableau would prevent weight conditioned high vowel deletion in the strong past participles, while allowing the more general process of non-high vowel deletion to proceed:

## (8.38) Light inflected

base +/-en-/+/e/ broc+en+e	MAX-V <sup>2</sup>	STRESSWELL	**Ǿ	MAX-V	PARSE-Ǿ	PARSE-σ
[ <sub>ω</sub> [.bro.ke.].ne.]			**!		*	*
[ <sub>ω</sub> [.brok.].ne.] <sup>⌈</sup>			*	*	*	*
[ <sub>ω</sub> [.bro.ke.]n]		*!		*		
[ <sub>ω</sub> [.brok.]n]	*!			**		

I have argued that this analysis is in fact not necessary for the synchronic data, as non-high vowel deletion is no longer in operation. In EWS, it has become replaced by HVD, and in *Li*, by stop conditioning. However, in Prim. Old English, the process was active. Although I argue that synchronically, vowel height is no longer a condition of high vowel deletion, in Prim. Old English, I assume it was an active condition, which distinguished the two processes. Therefore, there was no need for \*\*Ǿ to dominate its more specific counterpart, as PARSE-Ǿ would only target [+high] vowels. The leaves the question of why non-high vowel deletion ceased to apply, while high vowel deletion retains its activity. The answer is related to the fact that both processes target ‘weak’ vowels. The vowels are unstressed, within open syllables, and situated within stress wells:

## (8.39)

*High vowel deletion*

PARSE-Ǿ and StressWell

broc+en+e [<sub>ω</sub>[.bro.ke.].ne.]bund+en+e [<sub>ω</sub>[.bund.].ē.ne.]*Non-high vowel deletion*

\*\*Ǿ and StressWell

broc+en+e [<sub>ω</sub>[.bro.ke.].ne.]bund+en+e [<sub>ω</sub>[.bund.].ē.ne.]

As the illustration in (8.38) shows, the vowels targeted by non-high vowel deletion follow a stressed syllable and are monomoraic, placing them in a weak position. We can see, though, that the vowels targeted by HVD, which are underlined, are in a weaker position than those targeted by non-high vowel deletion. In addition to being light, they are also unfooted. Additionally, they are situated in a stress well created

by a foot rather than by a stressed syllable, which is a stronger adjacent element. Therefore, I conclude that deletion processes targeting monomoraic, weak vowels forms has been weakened in the grammar, to the point that only the process that targets the weakest vowels remains. This analysis, as stated above, brings together the basic markedness forces of the two different processes, assuming one to be a more specific counterpart to the other. This has implications for the analysis of high vowel deletion. In Chapter 2, I discussed two OT approaches to describing high vowel deletion. The first of these (Hogg 2000) assumed that the driving force behind deletion is  $\text{PARSE-}\sigma$ . Since this would incorrectly predict that a closed syllable would undergo deletion: e.g. [o[li:e].ved.], as the medial syllable, though closed, is also unfooted, Hogg (2000) proposed that another constraint:  $\ast\text{VVCC}$ , could prevent this from happening, as deletion would result in the following cluster:  $\ast\text{li}ef\text{d}$ . The alternative account, Bermúdez-Otero (2005) assumes instead that only light unfooted syllables are targeted, thus,  $\text{PARSE-}\check{\sigma}$  is the motivating constraint. The latter account is the one that is adopted here. It is argued that non-high vowel deletion and high vowel deletion therefore have similar motivations, i.e. to remove ‘weak’ vowels. It is further claimed that the process that removes the weakest vowels, high vowel deletion, is the one that has taken over in EWS, in favour of the original non-high vowel deletion. In this sense, the  $\text{PARSE-}\check{\sigma}$  account for the synchronic activity of high vowel deletion is preferable to the  $\text{PARSE-}\sigma + \ast\text{VVCC}$  account, since it incorporates the overarching markedness principle which is involved in the two processes, i.e., the penalising of monomoraic syllables.

## 8.7. CHAPTER SUMMARY

The past participle data have presented complex interaction between what were originally prosodic conditions, i.e. weight-conditioned vowel deletion and non-weight-conditioned vowel deletion, and emergent phonological conditioning. The weak past participles are assumed to be subject to active HVD, but with additional conditioning in the case of dentals in EWS. The fact that the same dental environment in the few Class 2 forms with an *-ed* suffix do not undergo syncope in West Saxon lends weight to the idea that the deletion process has only emerged in

circumstances in which HVD operates. This extra phonological conditioning is indicative of a process in decline (see Anttila 2002a for the *emergence of phonology*, and Bermúdez-Otero 2005 regarding the life-cycle of phonological processes).

In contrast, the original conditions for non-high vowel deletion are assumed not to be active, and instead can be explained with reference to principles of syllabification and their interaction with stop+nasal clusters, in *Li*. and high vowel deletion in EWS. This has been argued, in contrast to the handbooks, not to be the result of analogy.

The present analysis assumes that there is no synchronic vowel height condition separating non-high and high vowel deletion; only a prosodic condition. It is therefore unsurprising that, without vowel height conditioning, high vowel deletion has come to affect the strong past participle in EWS, as the inflected strong forms do present the correct prosodic conditioning synchronically.

A question remaining, however, is why the same thing has not happened in *Li*. The answer to this may be that although unfooted light syllables are presented in the strong past participle, they are within a class, i.e. the strong verb paradigm, that rejects high vowel deletion. This notion will be explored further in the next chapter.



## CHAPTER 9

### Implications

#### 9.1. INTRODUCTION

We have seen, in Chapters 6–8, that there are numerous ways of dealing with phonological change within inflectional paradigms, and across morphological categories. I have attempted to account for the problematic alternations within Lindisfarne and Early West Saxon in a way that a) reflects, where appropriate, levels of opacity and rule decay, b), reflects active phonological conditions where they exist, c) allows for morphological conditioning, and also I have avoided accounts that make predictions that contradict *priority of the base* (Benua 1997), since such predictions, when implying that any form may be selected as the base are not sufficiently supported cross linguistically. Finally, I have avoided, as discussed in Chapter 4, the over-use of unconstrained analogy as an explanation for morphologization and phonologization. Such accounts as those found in Neogrammarian handbooks fail to capture interesting instances of morphophonology and cause analogy to be merely an ‘elsewhere’ description. This problem has been discussed extensively in the literature, and has resulted in many attempts to constrain analogy, which were discussed in Chapter 4.

In this penultimate chapter, I will revisit some of the issues raised in Chapters 3 and 4 in the light of the data and analyses presented in Chapters 6–8. The implications of the data, and the accounts that have been proposed for the wider morphophonology will be discussed. Firstly, I will provide a brief overview of the main problems that have been accounted for, how (and if) they relate to one another and the methods that have been used. I will then go on to discuss the wider problem implied by my analyses, of how phonological processes operate in one morphological class and not another.



## 9.2. OVERVIEW OF THE ANALYSES

I have focused primarily upon the verbs, including the past participles taking adjectival inflections. The discussion has also made reference, where necessary, to nouns and adjective behaviour as described in previous studies (e.g. Bermúdez-Otero 2005, Scott 2005 etc.). The investigation of high vowel deletion has examined the data for parts of the paradigm in which HVD was expected historically (the weak pret. and weak past part.), those in which high vowel deletion was never expected (the strong past part.), and also, those in which high vowel deletion is assumed to apply, but in which the original prosodic conditions are not properly observed (the 2<sup>nd</sup>/3<sup>rd</sup>sg.pres.ind.)

The strong 2<sup>nd</sup>/3<sup>rd</sup>sg.pres.ind. verbs have been found to exhibit no evidence of weight conditioning in both Lindisfarne and Early West Saxon. It is clear that syncope has some kind of historical basis, as there are instances of deletion, even in Lindisfarne, of the historically high and light medial vowel. However, both dialects display no synchronic weight distinction, with Early West Saxon showing almost total syncope, whether or not it is appropriate to the weight, and with Lindisfarne showing the opposite; almost total rejection of syncope. The historical basis for syncope in these forms is, however, not without controversy. As pointed out in Hogg & Fulk (2011: §6.14), it may not be the case that high vowel deletion ever had much robustness in this category, since the prosodic conditions for high vowel deletion only require the removal of light unfooted syllables, i.e. those in which the syllable is open. The 2<sup>nd</sup>/3<sup>rd</sup>sg.pres.ind. shows overapplication in light stems, but most importantly, the target syllable is always closed: *scineð* [ω[sci:.].neð.] ~ *scinð* ‘shines’. Prosodically, the 2<sup>nd</sup>/3<sup>rd</sup>sg.pres.ind. has the same shape as the uninflected weak past participle, which is not expected to undergo deletion. Of course, the non-weight conditioned process of non-high vowel deletion that is discussed in Chapter 8 cannot be contributing to the apparent overapplication in the 3<sup>rd</sup>sg.pres.ind., since it, like high vowel deletion, has a rigid requirement that target syllables must be open. Since the prosodic conditions are compromised, and no other phonological

conditioning appears to be apparent, I have not provided a synchronic OT analysis.<sup>53</sup> Instead, the discussion will focus on why *Li.* has shown no deletion in this class, and why EWS has generalised the deleted forms. Interestingly, EWS also shows a distinction between the weak and the strong 2<sup>nd</sup>/3<sup>rd</sup> sg.pres.ind., since the weak forms do provide evidence for a weight condition, while the strong does not. Although in both categories, this leads to deletion in closed syllables, it appears to be the case that the weak forms, are more likely to show a lack of deletion after light syllables. In Campbell (1959), it is noted that deletion is more likely to fail in the weak forms. The situation is more complex, and indeed of more interest than that, since it is not the case that deletion simply fails more often in the weak present, but that it fails *in light forms* in the weak present: i.e. is weight conditioned. This leads to the question of whether the constraint enforcing deletion of all unfooted syllables, whether closed or long, is actually active to some extent within the weak present. If this is the correct analysis, it appears to be the case that it is not in action in the strong present in EWS, and that instead, the suffix itself has become reanalyzed as a vowel-less form. In the strong forms in Lindisfarne, on the other hand, it appears to be the case that high vowel deletion simply does not apply, which is unproblematic given that the prosodic constraints for high vowel deletion are not satisfied. Since overapplication in the uninflected past participles also does not happen in Lindisfarne, there is no surface evidence to indicate that closed syllables might undergo deletion.

On the other hand, the weak preterites, once again in both dialects under investigation, have displayed strong evidence for truly weight-based syncope. Table (9.1) provides an overview of the word categories focused upon in previous chapters, with respect to syncope, and its status as an active weight-orientated process:

---

<sup>53</sup> As far as West Saxon is concerned, I follow Hogg & Fulk (2011: §6.14), in assuming that lexicalised forms such as *cwoeðestu* may have been the trigger for the extension of high vowel deletion to this class. Closed syllables are not targeted by either non-high vowel deletion or high vowel deletion, with the exception of dental forms in the past participle. The past participles (non-dental) and the weak verbs do not provide exceptions to this.

*(9.1) Domains of syncope activity*

*(a) Weak pret. (Chapter 7)*

Morphological category	Syncope applying within weight constraints in Early West Saxon?	Syncope applying within weight constraints in Lindisfarne?
Weak Verbs: Class 1 Preterite	Yes (with additional dental conditioning, and obstruent+sonorant conditioning)	Yes (with additional dental conditioning, and obstruent+sonorant conditioning)
Weak Verbs: Class 2 Preterite	(No) (But the weight conditions are overruled by the medial vowel's underlying synchronic foot headedness specification)	(No)

*(b) Pres. Ind. (Chapter 6)*

Morphological category	Syncope applying within weight constraints in Early West Saxon?	Syncope applying within weight constraints in Lindisfarne?
Weak Verbs: Present indicative 2 <sup>nd</sup> /3 <sup>rd</sup> singular	Yes	No
Strong Verbs: Present indicative 2 <sup>nd</sup> /3 <sup>rd</sup> singular	No, but some weak dental conditioning and sonority sensitivity	No

*(c) Past part. (Chapter 8)*

Morphological category	Syncope applying within weight constraints in Early West Saxon?	Syncope applying within weight constraints in Lindisfarne?
Weak Verbs: Class 1 past participles	Yes (with additional dental conditioning)	Yes (without additional dental conditioning)
	Weight conditions added to non-high vowel syncope Early West Saxon?	Weight conditions added to non-high vowel syncope Lindisfarne?
Strong Verbs: Past participles	Yes (with additional stop+sonorant conditioning)	No (stop+sonorant conditioning only)

Following recent OT accounts, including Hogg (2000) and Bermúdez-Otero (2005), I have assumed that *PARSE-Ń* is the constraint that is active in Old English and that

leads to the deletion of historically unstressed short vowels in order to prevent unfooted syllables. Since statistically significant weight conditioning has been shown to be evident in all of the morphological categories in bold cells, it is argued here that high vowel deletion, as a phonological process, is synchronically active in Old English verbs. This contradicts the recent analysis found in Minkova (2012), as discussed in Chapter 7, which argues that, at least in Early West Saxon, high vowel deletion is already lexicalised.

### 9.3. HIGH VOWEL SYNCOPE AS A WEIGHT-BASED PROCESS, AND THE EFFECTS OF MORPHOLOGISATION

We have seen that HVD, a process which removes unfooted light syllables, is active in the verbs of *Li.* and EWS. The traditional analyses assume that high vowel deletion was a process that proceeded in Prim. OE. However, the data suggest that it was still active as a phonological process within the dialects under investigation. One way in which this can be signified is that a morphological category that originally was not affected by weight-conditioned deletion, the strong past participle, has come to be affected synchronically in EWS on account of the loss of an earlier and less robust process of non-high vowel deletion. I will return to this issue later in this chapter.

For the weak Class 2 verbs, a phonological account, rather than morphological, is all that is required to prevent deletion synchronically. High vowel deletion is agreed (e.g. Campbell 1959, Wright & Wright 1925 etc.) not to be subject to high vowel deletion, as the historically long thematic vowel is protected from deletion by a synchronic property of foot headedness (Bermúdez-Otero 2005). The fact that high vowel deletion does not proceed is therefore unproblematic, and expected. The forms have, however, been examined in order to check that syncope has not become extended to the also synchronically unstressed medial vowel in Class 2 preterite and past participle forms. A process<sup>54</sup> in which medial *-o-* in the Class 2

---

<sup>54</sup> In Chapter 7 it was argued that in Lindisfarne, in contrast to the claims in Wright & Wright (1925), this process could not be synchronically one of dissimilation in the plural: *-odon - edon*, since there was no statistical significance between the rates of *-e-* in target plural forms and in the singular preterite forms.

weak preterite becomes *-e-* might theoretically have been able to give rise to enough surface opacity that syncope could be applied to forms which synchronically resemble those found in Class 1. Despite this, it has been shown that syncope has not come to affect Class 2. In terms of the analysis, the lack of syncope synchronically has a phonological explanation that is demonstrated by other forms with a historically stressed and long. It is therefore clear that within a number of word classes, historical stress is allowed to prevent syncope from applying.

Moving on from the Class 2 forms, the next category of interest is the strong verbs. *Li.* is very clear-cut with regard to the strong verbs: there is no evidence to suggest that the original weight conditions of syncope are observed in any of the strong verb categories. The only strong verb category that shows any deletion is the past participle, in which there should not be any weight conditions originally in any case. Furthermore, it has been argued here that non-high vowel deletion is not active either, and that the deleted forms in *Li.* are entirely due to a separate phonological condition, which will be revisited in the next section.

The same morphologically specific inactivity cannot be said to be in evidence in EWS. The strong paradigm, in West Saxon, though, does not provide the same level of robustness of high vowel syncope as the weak paradigm. Syncope actually appears to apply in the majority of tokens from the 2<sup>nd</sup>/3<sup>rd</sup> sg.pres.ind. but with no weight condition in evidence in the strong paradigm. The rather surprising fact is that the past participle, which should exhibit the effects of non-high (and non-weight conditioned) vowel deletion, has come to be affected by weight conditioned deletion.

The weak Class 1 verbs are the verb category within which high vowel syncope is seen to be at its most active in both dialects. In Early West Saxon, the weak verbs show weight-conditioned syncope in the past participle, the preterite and also in the 2<sup>nd</sup>/3<sup>rd</sup> sg.pres.ind. In Early West Saxon, though, the weaker process of N-HVD has come to be replaced by HVD. The next section will discuss the reasons why this might have happened, and what we can deduce about the status of high vowel deletion from this behavior.

#### 9.4. NON HIGH VOWEL DELETION AND ITS SYNCHRONIC INACTIVITY

In Chapter 8 the behavior of the strong past participle, and its interaction with non-high vowel deletion was examined. It was argued that non-high vowel deletion did not display any synchronic activity. Recall that the prosodic conditions for non-high vowel deletion demand that a light open syllable is deleted when the vowel is historically non-high and follows a stressed syllable. The relevant constraints are **\*\*Ǿ** and **STRESSWELL**. If these constraints are active, the medial vowels following light or heavy stressed syllables will face deletion. However, deletion was seen to be very sporadic, and not regular. The handbook account put this down to analogical pressure from the uninflected strong past participles, in which the *-en* syllable is always closed and does not face deletion. In contrast, I have argued that analogy is not responsible, and that a separate phonological condition determines the outcome; namely the occurrence of a root-final stop.

According to the definitions of non-high vowel deletion, we did not expect to see a weight distinction in the past participles. However, non-high vowel deletion is argued to be no longer observing its phonological conditions. We have seen, with the final stop conditioning, that when a phonological process ceases to be active, other phonological conditions can either be added to, or even take the place of the original ones. This idea, that where phonological conditions are at their weakest, other conditions will emerge has been discussed in Anttila (2002a). I tentatively made the hypothesis, in Chapter 8, that high vowel deletion might be a potential emergent phonological process in the strong past participles. I have argued that synchronically, vowel height is not part of the conditioning for HVD. I have continued to use the term high vowel deletion, in keeping with tradition, to define weight-conditioned deletion. It is also worth noting that the weak and strong participles have the same vowel synchronically, and that evidence for the collapse of the original height conditions of HVD is also found in Bermúdez-Otero (2005), in which a novel nom/acc.pl.neut. low vowel suffix: *-a*, comes to be affected by HVD in Late West Saxon. Leaving aside vowel height, an inflected heavy strong past participle presents the following prosodic structure:

## (9.2)

*bindan* ‘bind’

past.part. bunden+ dat. *-um*

[<sub>ω</sub>[.bund.].e.num.]

As we can see from this illustration, the weight conditions for high vowel deletion are fulfilled in the strong past participles, when they are long and inflected. If we are to assume that the synchronic vowel height conditions have fallen away, there appears to be no reason why an active weight conditioned process, that operates in other parts of the paradigm, would not come to affect the strong participles. In EWS, this tentative prediction has been proved correct: a clear weight condition has emerged in the EWS strong past participles. We therefore have a situation in which, in EWS, high vowel deletion, further conditioned by final stops, has come to affect the strong past participles.

In Lindisfarne, in contrast, it is very clear that this has not happened, as there is no evidence for weight conditioning in the strong past participle. I will now discuss why this may be the case. It is my intention to argue that the extension of HVD to the strong past participles has not failed in Lindisfarne because HVD is less robust, since the data show that in Lindisfarne the weight conditions are active and well in the weak paradigm. Nor will I argue that a synchronic phonological condition prevents HVD from affecting the strong participles. Instead, I will suggest that the reason is morphological, and will present evidence to show that if the morphological conditions are right, HVD in *Li.* can indeed come to affect the forms originally associated with non-high vowel deletion, using an example from the adjectives. Thus, I will argue that the blocking of high vowel deletion in the strong verbs is a feature of Lindisfarne, and that it is due to the powerful surface evidence against syncope within the strong paradigm.

### 9.4.1. *The status of former non-high vowel deletion forms in Lindisfarne*

We have seen in Lindisfarne, that N-HVD has come to be replaced by stop conditioning, but not by weight-conditioned HVD. However, this is not to be taken

as indicative of the weakness of high vowel deletion in Lindisfarne. On the contrary, Lindisfarne has displayed a robust weight conditioned process in the weak preterite and weak past participle. This leaves the question of why HVD has not come to affect the strong *-en* forms, despite their synchronically similar shape to the weak past participles. The proposal that will be discussed here is that in Lindisfarne, HVD is an active, but morphologized process. Therefore, the strong past participle has rejected the spread of weight conditioned deletion because it is not a part of a paradigm within which high vowel deletion is active. This idea can be quite easily falsified, by finding a set of forms that are traditionally associated with non high vowel deletion that exist within a domain that does show activity of weight conditioned syncope. If, within these forms, HVD is seen not to spread the former domain of N-HVD deletion, we lose empirical evidence for the following three proposals: a) that HVD is an active process that may spread to new forms, b) that this spread is limited by the morphological category of the new forms and c) that HVD has no synchronic vowel height conditions. Such a category exists; according to Hogg (1992: §6.15), adjectives ending in *-ig* are assumed to be subject to non-high vowel deletion. As such, if the original process is still in action, there should be no weight condition. These forms, though, exist within a domain of high vowel deletion: the *a-* stem adjectives. Under my analysis, there is no synchronic reason why a heavy form with *-ig* should not undergo HVD, since I have argued that the vowel height condition is not relevant, and any cophological analysis could certainly not rule out HVD in *-ig* adjectives, since adjectives fall squarely within the domain of HVD. If we find that there is no weight condition, either with variable deletion in heavy and light (indicative of N-HVD), or with no deletion, it would compromise the assertion that HVD is still active.

The following table displays the results for the *-ig* adjectives in the Lindisfarne Gospels. There are two historical *-ig* suffixes, one of which was high, but long and stressed, from Germanic */i:ȳ/*, and therefore would not undergo any syncope. These forms can be identified by the mutated stem vowel, and have not been included in the table (but can be found in the Appendix D). The other suffix comes from the Germanic suffix *\*/aȳ/* and should therefore undergo non-weight conditioned syncope, according to Hogg (1992: §6.15). The following table includes



only those forms with the historically light suffix; Gmc. \*/aʏ/. The forms with *i*-mutation have not been included, as they are assumed to come from Gmc. /i:ʏ/.

(9.3)

Gmc. */aʏ/ forms (-ig)	Syncope	Total	% Syncopated
light -ig forms	1	15	7%
heavy -ig forms	51	80	64%

There is a statistically significant weight condition, and it therefore appears to be the case that high vowel deletion, I.e., unfooted light syllable repair, has come to affect the -ig adjectives. As stated earlier, non-high vowel deletion has ceased to operate as a regular process, and has instead been replaced with final stop conditioning in the past participle, and high vowel deletion in the adjectives. Thus, we have a situation, within the Lindisfarne gospels, in which the weight-conditioned process has been extended the adjectives, but not the strong verbs. This, once again, raises the question of why high vowel deletion has not come to affect the strong verbs in Lindisfarne, but has come to affect another category, which was also originally affected by non-high vowel deletion. It is not possible to formulate an account in which high vowel deletion has come to affect -ig simply because the suffix has a synchronically high vowel, since this is clearly not a condition of HVD synchronically. Instead, it is argued here that morphological conditioning influences the way in which high vowel deletion applies. As stated above, where N-HVD deletion has lost its productivity, other conditions emerge (Anttila 2002a). In this case, HVD has been limited to the morphological domains within which it operates. If simply phonological, there is no reason why the synchronic process of HVD should not affect the strong inflected participles, as the vowel height condition is no longer active, though it was in Prim. OE. Although the weak verbs and the noun and adjective paradigms are within the domain of HVD, the strong verbs are not, though the situation has been shown to be rather different in EWS. For Lindisfarne, the reason for the blocking effect in the strong verbs is simple when we look at the

surface evidence from which a learner would construct their grammar. To begin, we have a striking imbalance regarding the number of parts of the paradigm that are subject to syncope in the first place:

(9.4) *Areas in which the weak and strong verbs present the conditions for syncope*

	Weak (Cl. 1)	Strong
2 <sup>nd</sup> /3 <sup>rd</sup> sg.pres.ind.	Yes?	Yes?
Preterite	Yes	No (no /i/ ending: ablaut)
Inflected Past Participles	Yes	No

This illustration is not intended to chart where syncope actually applies successfully (see table 9.1 for that information), but instead, this represents which areas of the verb paradigms actually present the conditions for high vowel syncope *if it should apply*. At first glance, it is very clear that the weak Class 1 verbs present the target environments for syncope in more areas of the paradigm than the strong verbs. Firstly, the ablaut system of course makes the preterite irrelevant to high vowel syncope. On the other hand, the preterite in the weak Class 1 verbs provides a wealth of evidence for which a learner can construct a grammar within which unstressed light vowel are deleted when unfooted. The past participle historically undergoes only non-high vowel deletion if strong, which is non-weight conditioned. This leaves only the 2<sup>nd</sup>/3<sup>rd</sup> sg.pres. indicative, though there remains the problem of the ‘target’ vowels being within closed syllables. The endings in both the weak and the strong forms are historically light and high, so it would perhaps be expected that evidence from the 2<sup>nd</sup>/3<sup>rd</sup> sg.pres.ind. would be enough for a learner to construct a grammar that incorporates syncope in the strong verbs. This assumption would of course be incorrect, and the problem with it can be seen when we look at the data for the 2<sup>nd</sup>/3<sup>rd</sup> sg.pres.ind. In both Lindisfarne and Early West Saxon, there was no weight condition evidenced in the strong verbs in these endings. Regarding the weak verbs, there was to some extent a weight condition in Early West Saxon, but Lindisfarne exhibited no active syncope in the 2<sup>nd</sup>/3<sup>rd</sup> sg.pres.ind in either the weak

or the strong. It becomes instantly clear that the one environment within the strong verbs that might have provided evidence for strong verb syncope is itself exhibiting syncope immunity. Syncope in the second and third person present has been the source of much discussion, as these inflexions do not actually present the conditions for high vowel deletion at all. A form such as *sing+eð* does not present an unfooted light syllable, as would be penalized by PARSE-Ō, as the syllable is closed. If a general rule enforcing syncope in closed syllables was in existence, there would be deletion in uninflected nouns such as *hēafod*, which is not attested. Hogg & Fulk (2011: §6.14) claim that the reason that syncope came to apply in these environments in verbs was due to lexicalised 2<sup>nd</sup> person forms such as *cwoeðestu*, in which the target vowel does in fact become part of a light syllable. It is also proposed (Hogg & Fulk 2011: §6.15) that syncope in Anglian was most likely never widespread in the first place in the 2<sup>nd</sup>/3<sup>rd</sup> sg.pres.ind. Therefore, it is not difficult to propose an account in which syncope in the present indicative is weakened, since its application in the first place may have been on the basis of limited evidence from lexicalized forms.

In sum, the argument pursued here is that syncope in the 2<sup>nd</sup>/3<sup>rd</sup> sg.pres.ind. is non-existent in Lindisfarne, and is morphologized in West Saxon. This is due to its uncertain status in these forms, and the fact that it does not fulfil the original weight conditions of syncope, which state that only open syllables will be targeted. The second part of the argument is that the loss of syncope in the 2<sup>nd</sup>/3<sup>rd</sup> sg.pres.ind. in Lindisfarne removes from the sphere of syncope the only part of the strong paradigm within which syncope might apply. These complexities result in such a poverty of evidence for syncope in the strong verbs that they become immune to weight-based HVD. It is not surprising that Lindisfarne shows this immunity to a greater extent than EWS, since, as Hogg & Fulk (2011) state, Lindisfarne perhaps never had syncope in the 2<sup>nd</sup>/3<sup>rd</sup> sg.pres.ind. generalised in the first place. Thus, in both the 2<sup>nd</sup>/3<sup>rd</sup> sg.pres.ind., and in the strong verbs in general, a complex set of phonological conditions has come to be more easily learnt as a simple morphological condition; i.e. *no syncope in the strong verbs*. The fact that other forms that are not historically expected to be subject to high vowel deletion can come to be affected by the process, namely the *-ig* adjectives, shows that the only factors involved in whether HVD can

come to affect forms are a), their prosodic conditions, and b) their morphological domain.

In terms of the phonological analysis, I assume a co phonological account, in which different morphological categories may select a variant of the master hierarchy. In our case, the constraint enforcing unfooted syllable repair must be ranked lower than MAX-V in Lindisfarne strong verbs, rendering high vowel deletion inactive. In the weak verbs, in contrast, it outranks MAX-V variably. We therefore have a relatively subtle distinction, with the weak verbs showing a variable stochastic ranking between the two constraints. The picture is as follows:

(9.5)

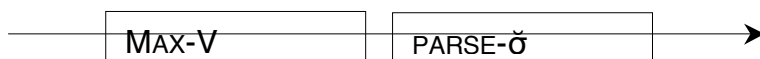
(a) Lindisfarne weak verb system: *Variable weight-conditioned deletion*

PARSE-Ō >> MAX-V



(b) Lindisfarne strong verb system: *No weight-conditioned deletion*

MAX-V >> PARSE-Ō



In terms of the stratal analysis, this relationship occurs at Level 2. It is not possible to assume that syncope operates at Level 1, and to divide the strong and weak verbs between the two levels, since it is the adjectival Level 2 inflections that trigger syncope. Additionally, it would be wrong to place the weak Class 1 verbs in an earlier level than their strong, and less productive counterparts. Alternative analyses could be posited. For example, the vowel height condition could be argued to be synchronically active, and the relevant vowels high underlyingly. However, such an

analysis would not be preferable, since there is a lack of surface evidence from which a learner could construct underlying representations with a high vowel. Additionally, the extension of HVD to the strong past participle in EWS would be a problem, since the vowel is by the same token would not be underlyingly high. Another alternative analysis would be to assume that paradigm uniformity constraints force *-ig* to fall in line with the majority of the adjectival paradigm, in Lindisfarne, while allowing the strong past participle to avoid deletion on account of its strong paradigm not showing weight conditioned deletion. The problem with this analysis would be that since a weight condition exists, the paradigm uniformity constraint would have to incorporate weight sensitivity. Additionally, though HVD in *-ig* forms might make these adjectives behave like other adjectives, it actually creates phonological contrasts within the paradigm. I will maintain the argument here that co-phonologies exist within Old English, and that the Emergence of Phonology is dependent upon morphological category.

#### 9.5. THE EFFECT OF ADDITIONAL PHONOLOGICAL CONDITIONS

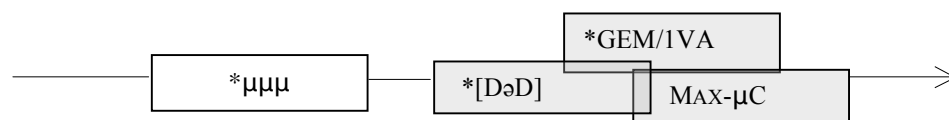
Both non-high and high vowel deletion have demonstrated the acquisition of phonological conditioning. As explained in Anttila (2002a), it is expected that when phonological conditions are at their weakest, phonological and morphological conditions emerge. We have seen above that morphological conditioning has indeed emerged with respect to high vowel deletion. Non-high vowel deletion, on the other hand, is at an increased stage of its demise, and does not show morphologization, since it can be said that its original conditions cannot be claimed to be enforcing the alternations we see. Instead, alternative phonological processes have taken over the forms originally affected by non-high vowel deletion. This is the ultimate stage of Anttila's Emergence of Phonology; the phonology has become so weakened that it has become replaced with other conditioning in both the Lindisfarne Gospels and Early West Saxon. In terms of high vowel deletion, phonological conditioning is also evident, though only in West Saxon. In both EWS and *Li*, HVD interacts with syllable well-formedness constraints that determine that geminates formed through syncope must be simplified when the alternative is a VCCC cluster. In West Saxon,

however, a condition on dental+schwa+dental constructions causes high vowel deletion to over apply in forms with a root-final dental. This conditioning was not apparent in Lindisfarne in terms of the past participle, though it was in the weak preterite.

### 9.5.1. Formation of geminates

The formation of geminates is constrained in past participles and verbs, indicating an optimal syllable shape as well as a restriction upon gemination. This has been represented in the analyses. EWS and *Li.* have a restriction upon the environment in which a geminate may be formed from a syncopated dental-final root + de. Vowel+d/t forms were permitted to form geminates, while consonant+d/t forms were not. The analysis assumes that the prevention of trimoraic feet is the reason behind the alternations. When a geminate is formed after a consonant cluster, it is banned since it would result in the following parse: [<sub>ω</sub>[.send.].de.]. The constraints on geminate simplification result in a variable process in uninflected past participles, but allows for the prevalence of inflected *lædde* in EWS. I have assumed stochastic rankings to account for this, which I repeat here:

(9.6)



Such a condition was not evident in *Li.* past participles, in which dentals could not force syncope in closed syllables. The conditioning was, however, present in the weak preterite of *Li.*

### 9.5.2. Consonant sonorant clusters

In the weak preterite in both Lindisfarne and in EWS, consonant+sonorant clusters are associated with lower overall rates of syncope than in ‘simple’ heavy forms. A form such as *timbr+edon* would result in a cluster that cannot be syllabified if undergoing syncope (as pointed out by Minkova 2012), and would require epenthetic repair: *timberde*. Such forms are attested in Lindisfarne. In West Saxon, in which *timberde* type forms do not surface, it appears to be the case that the unsyllabifiable cluster blocks syncope. In Lindisfarne, on the other hand, syncope interacts with epenthesis.

### 9.5.3. Dental conditioning

Dental conditioning comes into play when a sequence involving [dəd] arises. Since such sequences are marked, syncope is more likely to apply, and even to overapply in order to correct them. The morphological categories relevant are the weak Class 1 preterites, as these are the forms in which a /d/-initial suffix is attached. A surprising condition, though less robust, is also evident in the 2<sup>nd</sup>/3<sup>rd</sup> sg.pres.ind. in the strong verbs of West Saxon. Such a condition is surprising in that a [DəD] sequence is not created during the present indicative inflexion. It is worth noting, however, that there is strong evidence within the dialect to associate syncope with dentals, and it is conceivable that the phonological condition specified in tableau (8.21) penalizing [DəD] sequences is itself subject to further conditioning, perhaps allowing syncope to become associated with dentals even in environments that do not contravene \*[DəD], as it is not a fully robust rule. The fact that some [DəD] clusters are permitted in the weak Class 2 verbs indicates that the constraint banning the deletion of a vowel marked as heading a foot is ranked higher than \*[DəD].

### 9.5.4. The root-final stop conditioning

In the discussion in this chapter of the demise of the original conditions for non-high vowel deletion, I focussed upon the success of high vowel deletion applying in the

strong past participle of West Saxon. In Lindisfarne, non-high vowel deletion also loses out to another phonological condition, which will be the focus of this section. We have witnessed, in the strong past participle, the effects of a condition affecting root-final stops, when affixed by the schwa+nasal past participle suffix. In Lindisfarne, this is the only condition that is relevant in determining whether a vowel inclusive of vowel-less output is the result. In West Saxon of course, there is also evidence that weight conditioning plays a role. The Lindisfarne Gospels may additionally display the results of a slightly more specific condition, relating to coronal stops; i.e. homorganic with the nasal. In both dialects, however, forms lacking the medial vowel are not permitted unless in the instance of a root-final stop. Interestingly, a similar phenomenon affects PDE obstruent+sonorant clusters in before Level 1 morpheme boundaries, e.g. *lightning* (Giegerich 1999). prosodically, the structures are similar: [ω[.lait.].nɪŋ.], [ω[.bund.].num.]. Both have a similar morphological structure, though in the PDE example, the syllabification pattern only applies before Level 1 affixes, and thus, Level 2 *lightening*, as ‘*she was lightening the paint*’, would not follow the same pattern. In OE, the *-um* is not assumed here to be a Level 1 affix, as the adjectival paradigm presents data to suggest that a stratal split exists in which oblique *a*-stem affixes are at Level 2, and reject the Level 1 process of apocope, where applicable (See Scott 2005. This follows Bermúdez-Otero’s 2005 analysis of the nouns). It is not particularly surprising that a syllabification pattern that once existed at a lower level has moved to a higher level in later varieties of the language.

#### 9.6. TRADITIONAL ANALOGY VS. THE EMERGENCE OF PHONOLOGY AND MORPHOLOGY

With regard to analogy, the present analysis provides a more enlightening account than the traditional Neogrammarian descriptions. I return once more to the dental conditioning in the weak past participle of West Saxon. In Chapter 8, it was argued that although high vowel deletion is active within the weak past participles, it is delicate enough for further morphological and phonological conditioning to emerge. This is in line with the observations made in Anttila (2002a) regarding the *emergence of phonology* and the *emergence of morphology*. Phonological conditions



that are not strong enough to operate regularly within the language might emerge when in competition with other delicate phonological processes.

Traditionally (e.g. Campbell 1959), it was assumed that an analogical process caused weak past participles ending in dentals such as *send+ed* to undergo syncope in uninflected forms. This represents a case in which high vowel deletion appears to overapply. Furthermore, it was also assumed that non-dental forms were liable to show underapplication of syncope, also due to analogy. Such an account has been argued here to be incorrect. It is claimed instead that the dental conditioning has nothing to do with analogy, and that an emergent phonological process is instead in evidence. The problems with the Neogrammarian account are that not only does it fail to capture a process of phonologisation that is interesting in terms of the progression of sound change and rule decline, but also, it permits analogy to go beyond reasonable limits of explanation, with the result that it is unclear, as discussed in Chapter 3, what analogy exactly means. The three most serious problems with the analogical account are that 1) the dental syncope overapplication is not irregular, as expected in traditional definitions of analogy, 2) the analogy does not bring the morphological paradigm in line, and in fact, appears to work towards creating dissimilarity between overapplying /d/ forms and underapplying non-d forms within the same paradigm, and 3) the ‘analogical’, i.e. morphological process is concerned entirely with phonology. It is also unclear what the basis for the analogy is.

In contrast, the morphophonological analysis posited in Chapter 7 does not compromise the definition of analogy, and instead assumes the dental conditioning to be an emergent process in avoidance of phonological markedness relating to [DəD] clusters. The fact that such clusters are not banned within the language is not a problem, as the analysis does not suggest that they are completely banned, or that they would be corrected in normal cases. Instead, a deletion process that also has the benefits of correcting the marked cluster is allowed to go beyond its normal limits. It is therefore the case that \*DəD has emerged only in the morphological categories within which high vowel deletion operates. Additionally, a separate condition preventing underlyingly pre-specified foot heads from being deleted (see Bermúdez-Otero 2005) protects the few [DəD] constructions within Class 2 from being

targeted. In this sense, another phonological condition has been added to the conditions of high vowel deletion. This account, therefore, accurately represents a system in which high vowel deletion is statistically shown to act in accordance with syllable weight, though is far from exceptionless, and is limited to certain morphological categories. This system is therefore liable to undergo further morphological and phonological conditioning, and in the case of the weak past participles, phonologisation occurs. I reiterate here the claims made in Anttila (2002a), Anderson (1988) and Bermúdez-Otero (2005) that such conditions of morphological and phonological natures only become added to rules that are themselves of an opaque or delicate nature, with the end result being the total reanalysis or death of the once robust phonological process.



## CHAPTER 10

### Conclusion

A number of implications for the ways in which sound change can progress have been made throughout the thesis. In Chapter 1 I raised the issue of the complexity of Old English inflexional paradigms and their interaction with phonological processes. Following recent accounts, such as Bermúdez-Otero (2005) and Minkova (2012), I have argued that the traditional Neogrammarian accounts of HVD, in which it is assumed that the change proceeded with regularity at an earlier stage of the language and then simply stopped, its effects subsequently being disturbed by analogy, are inadequate in accounting for the way in which sound change progresses. This idea was revisited throughout Chapters 2, 3 and 4. In Chapter 2, the traditional philological accounts and their insights into the behaviour of OE in *Li.* and *EWS* were discussed, and I also laid the basis of the later OT analyses. In particular, a basic OT account for synchronic HVD and N-HVD was posited. The basic rankings are as follows:

(10.1)

HVD

$$\text{MAX-V}^2 \gg \text{STRESSWELL} \gg \text{PARSE-}\check{\text{O}} \gg \text{MAX-V} \gg \text{PARSE-}\sigma$$

(10.2)

N-HVD

$$\text{MAX-V}^2 \gg \text{STRESSWELL} \gg \text{**}\check{\text{O}} \gg \text{MAX-V} \gg \text{PARSE-}\check{\text{O}}$$

The ranking for HVD has been claimed, throughout the thesis, to be active in the synchronic grammar in *EWS* and *Li.* On the other hand, the past participles in both dialects have shown that the ranking for N-HVD is not in force. In the case of the *EWS* strong past participles, N-HVD has been replaced with HVD. Not only does this show that HVD is indeed active in the grammar synchronically, but it also raises an interesting issue regarding the demise of the former process. By having the more

general constraint  $**\check{\sigma}$  ranked above PARSE- $\check{\sigma}$ , the latter, more specific constraint is naturally redundant. Any vowel that violates PARSE- $\check{\sigma}$  has to violate  $**\check{\sigma}$ . The rankings for N-HVD and HVD can therefore not exist at the same time, within the same morphological category without the vowel height condition. This is because an alternation brought about by weight-conditioned HVD, such as *hēafdu* ~ *werodu* would be obscured by the application of N-HVD in light stems, which of course has not happened. N-HVD clearly did not have its vowel quality conditions relaxed while it was in operation. The retention of HVD in the grammar, as opposed to N-HVD suggests that the language became more tolerant of light syllables within stress wells, but continued to penalise those which were the weakest, i.e. those with high marked vowels, and within unstressed *and* unfooted syllables. Thus, we have a fairly specific constraint; PARSE- $\check{\sigma}$ , in operation, which suggests a delicate phonological process. The loss of the synchronic vowel quality condition in EWS and *Li*, and also the strong verb paradigm's resistance to HVD even in forms that might seem to be valid targets in *Li*, also points to the delicacy of the process. This lack of robustness is also evident in the variation that has been discussed with respect to HVD, which has been modelled using Stochastic OT. Returning to our central point, these behaviours require the use of a phonological theory that predicts variation and morphologisation. The problems with Neogrammarian explanations, and some of the important developments made within LPM and Stratal OT were discussed in Chapter 4, and I have argued that by using Stratal OT for the present analyses, it has been possible to model synchronically the process of HVD within the lexicon, entailing that the process is sensitive to morphology. As discussed in Zec (1993), processes may be seen to begin their life as Neogrammarian change, percolating deeper into the lexicon, with Level 1 as their final resting place. As shown by Anttila (2002), processes undergoing the loss of their phonological conditioning are predicted to acquire new phonological and morphological conditions. In addition to modeling the life-cycle of phonological processes (Kiparsky 2003, Bermúdez-Otero 2005), Stratal OT has the benefit of explaining language change in terms of universals, lacking the stipulative nature of rules. Additionally, the model has been successful in modeling the variation in the past participle through stochastic rankings (Boersma 1997) without losing any explanatory power.

Many of the examples from the present study as well as from the wider literature suggest that it is necessary to allow phonology and morphology to interact. In the case of the weak past participles in *Li*, for example, it is necessary to allow simultaneous constraint rankings, i.e. cophonologies, in order to account for the lack of dental conditioning, compared to the weak preterite in the same grammar, in which \*[DəD] appears to be active. Cophonologies can also explain why HVD is able to affect the strong past participle in EWS but not in *Li*. In Lindisfarne, PARSE-Ō is therefore ranked below MAX-V within the strong paradigm.

The analysis proposed to allow for variation between uninflected *lāded*, *lædd*, *lāed*, and *setted*, *sett* and *set*, while preventing *sendd*, has also been able to predict the inflected lack of variation in the long forms with a long root vowel, as in *lāedde*. This has rested upon the potentially controversial assumption that reduction in stem vowel length is permitted in order to prevent a trimoraic foot. This option is not available for *\*sendd*, and thus, degemination is forced. This vowel shortening process certainly happened by the time of Late Middle English at least, and evidence from the *Ormulum* has been discussed which might point to an Early Middle English, or earlier, shortening. A more in depth examination of the evidence would be an interesting avenue for further study.



## Appendix A

### The Present indicative verbs

#### (A1) Present indicative verbs in EWS

The data found in these lists have been extracted from Cosijn's (1888) data lists. *Or.* signifies that the form is from Orosius, *CP* (*H*, *C*) denotes the Cura Pastoralis; *H* standing for the Hatton manuscript, and *C* for the Cotton. Forms from the Parker Chronicle are listed as *Chron.* with the number referring to the year of entry.

The 1<sup>st</sup> sg. Pres.ind ends in *-e* in Early West Saxon, the only exception is '*cwetho ic*' in *CP* 27 (Cosijn 1888: §72). The 1<sup>st</sup> sg.pres.ind. has therefore not been taken, and this appendix will focus only on syncope in the 2<sup>nd</sup>/3<sup>rd</sup> sg.pres.ind. One token showing apocope is attested, in Class VI *wacan* 'awake' 1<sup>st</sup> sg. ind. ic *anwoc* *CP* (*H*) 431.17, *onwoc* *Chron.* 547, though the form may be in the past tense.

#### (A1.1) Strong verbs in EWS

##### (A1.1.1) Heavy forms

##### *Class I (Cosijn 1886: §79)*

##### Unsyncopated

(*awega*)*drīfan* 'drive away'

3<sup>rd</sup> sg. *adrifeð* 2 *HC*

(a)*stīgan* 'proceed'

3<sup>rd</sup> sg. *astigeð* *CP* (*H*, *C*) 103.16.18.19

##### Syncopated

(a)*stīgan* 'proceed'

3<sup>rd</sup> sg. *oferstigeð* *CP* (*H*, *C*) 33.13, *CP* (*H*) 409.29, 433.8

(*ge*) *bīdan* 'live/remain'

3<sup>rd</sup> indicative *bitt* 220 (10, 14), 226 (11?), *bit* *CP* (*H*) 227.11,

*bītan* 'bite/tear'

3<sup>rd</sup> sg.pres ind *abitt* *Or.* 246.27

(*awega*)*drīfan* 'drive away'

3<sup>rd</sup>. sg. *driefð* 1 *H*, *drifð* 3 *C*,

*glīdan* 'glide'

3<sup>rd</sup> sg *glit* *CP* (*H*, *C*) 279.2

*grīpan* 'attack/take'



*gegri(e)pð 3 HC*

*ge- onhrīnan ‘touch’*  
*3sg ge-, onhrinð 4H, 2C,*

*rīpan ‘reap’*  
*3<sup>rd</sup>.sg ripð 3H, 2C = ripeð*

*gerīsan ‘rise’*  
*3sg. gerist CP (H, C) 61.10, gerisð,*  
*stð CP (H, C) 75.8*

*scīnan ‘shine’*  
*3<sup>rd</sup> sg. sci(e)nð 3H*

*sīgan ‘descend’*  
*3<sup>rd</sup> sg. asigð ‘labitur?’*

*slītan ‘slit’*  
*3<sup>rd</sup> sg. (to)slit*

*besmītan ‘soil’*  
*besmīt 1HC*

*be- geswīcan ‘fail/abandon’*  
*3sg. (be, ge) swicð 2HC*

*wītan ‘guard’*  
*3<sup>rd</sup> sg. gewit 2H 1C,*

*snīðan ‘cut’*  
*3<sup>rd</sup> sg. snið 2HC*

*ðēon ‘lengthen’*  
*3<sup>rd</sup> sg. oferðihð CP (H) 411.36*

## ***Class II (Cosijn §81)***

### **Unsyncopated**

*(a-, for-) bēodan ‘command’*  
*3<sup>rd</sup> sg. (be)beodeð 4HC (I § 102, 1)*

*hrēowan ‘repent’*  
*3<sup>rd</sup>.sg. gehreoweð 1HC*

*for/an/ge- būgan ‘bow’*  
*3<sup>rd</sup>.sg. gebygeð CP (H) 301.22*

### **Syncopated**

*(a-, for-) bēodan ‘command’*  
*3<sup>rd</sup> sg. be- forbiet 4H 2C, bebitt 1C*

*adrēogan, adrīogan ‘live/practise’*  
*3sg. gedrigð, -hð CP (H, C) 347.18*

*gēotan ‘gush’*  
*3<sup>rd</sup> sg giet(t) 2HC*

*lēogan ‘lie’*  
*3<sup>rd</sup>.sg. li(e)hð 4HC*

*ā-, oferscēotan ‘shoot out’*  
*3.sg. (uta)sciet CP (H) 71.7, Or 8.25, -*  
*scieð CP (C) 70.7, scȳt, scyt 5 Or.*

*āðrēotan ‘displease’*  
*3.sg. aðriet 1H*

*hrēowan ‘distress’*  
*3<sup>rd</sup>.sg. hreowð 1 H, hriwð 2H, 1C.*

*(ge)cēosan ‘choose’*

3<sup>rd</sup> sg. *gecist* CP (H) 51.4, 407.7, CP (C) 202.23. *gecistð* CP (C) 50.4, *geciesð* CP (H) 203.23

*flēon* ‘escape’  
3.sg. *(ge)fli(e)hð* 5H, 4C,

*hrēosan* ‘fall’  
3. sg. *gehris* CP (H, C) 31.1, *gehri(e)sð* CP (H, C) 289.9

*forlēosan* ‘lose’  
3.sg. *forli(e)st* 5H, 8C, *-sð* 7H, 2C

*(a-, ge-, of-, ðurh)tēon* ‘carry out’  
3<sup>rd</sup>.sg. *of-/ðurhti(e)hð* 8H, 6C

*brūcan* ‘use’

3<sup>rd</sup>.sg. *brycð* CP (H, C) 57.7, CP (H) 399.8

*for/an/ge- būgan*  
3<sup>rd</sup>.sg. *forbygð* CP (H, C) 297.20

*dūfan* ‘sink’  
3<sup>rd</sup>.sg. *gedyfð* CP (H) 427.37

*be- onlūcan* ‘unlock’  
3<sup>rd</sup>.sg. *belycð* CP (C) 220.13, *anlycð* CP (H, C) 91.13

*onlūtan* ‘bow’  
3<sup>rd</sup>.sg. *onlytt* 1H, *onlyt* (long), *onlyt*, 1H, 2C,

*bescūfan* ‘expell’  
3<sup>rd</sup>.sg. *toscyfð* 1 HC

### **Class III (Cosijn 1888: §84)**

#### **Unsyncopated**

*(ge)bindan* ‘bind’  
3<sup>rd</sup>.sg. *gebindeð* 1H, 1C

*onginnan* ‘begin’  
3<sup>rd</sup>.sg. *ongi(e)nneð* CP (H, C) 217.9

*swincan* ‘labour’  
3<sup>rd</sup> sg. *swinceð* CP (H, C) 251.4, CP (H) 285.13

*swingan* ‘strike’  
3<sup>rd</sup> sg. *swingeð* CP (H, C) 253.4

*limpan* ‘happen’  
3<sup>rd</sup> sg. *(be-, ge)limpeð* 2h 3c

*l + cons*

*(ge)helpan* ‘help’  
3<sup>rd</sup> sg. *hi(e)lpeð* CP(H,C) 173.19

*verbs with lc, r or h + consonant*  
(Cosijn 1888: §87)

*(a-, be-, to)weorpan* ‘throw’  
3<sup>rd</sup> sg. *toweorpeð* CP (H, C) 277.24

*weorðan* ‘become’  
2<sup>nd</sup> sg. *ðu weorðesð* CP (H) 181.9  
*wyrðest* CP (C) 180.9  
3<sup>rd</sup> sg. *weorðeð* CP (H, C) 255.5

#### **Syncopated**

*(ge)bindan* ‘bind’  
3<sup>rd</sup>.sg. *gebint* 2H, 2C

*(a)drincan* ‘drink’

3<sup>rd</sup>.sg. *drincð* 4HC

*findan* ‘show/ meet with’  
2<sup>nd</sup>.sg. *ðu findst, -tst*, CP (C, H) 331.5

*onginnan* ‘begin’  
3<sup>rd</sup>.sg. *ongi(e)nð* 6H, 2H, 4Or

*blinnan* ‘forfeit’  
3<sup>rd</sup>.sg. *(a)blind* 2HC

*besinca(n)* ‘sink’ (intransitive)  
3<sup>rd</sup>.sg. *besincð* Or 12.28

*singan* ‘sing’  
3<sup>rd</sup>.sg. *singð* 2H

*springan* ‘jump’  
3<sup>rd</sup>.sg. *aspryngð* Or 12.29

*swincan* ‘labour’  
3<sup>rd</sup>.sg. *swincð* CP (C) 284.13

*swingan* ‘strike’  
3<sup>rd</sup>.sg. *swingð* CP (H, C) 251.23,  
267.7.8

*āðindan* ‘swell’  
3<sup>rd</sup>.sg. *aðint* CP (H, C) 35.3, CP (H)  
113.18, *aðintt* CP (C) 113.18

*windan* ‘to wind/ twist’  
3<sup>rd</sup>.sg. *(a-, ge)wi(e)nt* CP (H, C)  
167.1.7.8.9, 241.11

*(ofer-, wið)winnan* ‘labour’  
3<sup>rd</sup>.sg. *wi(e)nð* 4H 4C

*limpan* ‘happen’  
3<sup>rd</sup>.sg. *(be-, ge)limpð* 6H 4C

*i(e)rnan* ‘move rapidly’  
3<sup>rd</sup>.sg. *i(e)rnð* 2H 1C 1or

§verbs with *l* + consonant

## Class VII

### Unsyncopated

*sāwan* ‘sow’  
3<sup>rd</sup>.sg. *sawed* 1HC

*gi(e)lpān* ‘praise’  
3<sup>rd</sup>.sg. *gilpð* CP(H) 463.27

*swelgan* ‘swallow’  
3<sup>rd</sup>.sg. *forswilgð* CP(H) 417.10

*swellan* ‘swell’  
3<sup>rd</sup>.sg. *asuilð* CP(H, C) 73.10

§87 verbs with *lc*, *r* or *h* + consonant.

*beorgan* ‘guard’  
3<sup>rd</sup>.sg. *birgð* CP (H, C) 297.17

*(ge)feohtan* ‘fight’  
3<sup>rd</sup>.sg. *fi(e)ht* CP(H, C) 277.25

*hweorfan* ‘turn’  
3<sup>rd</sup>.sg. *gehwi(e)rfð* CP (H, C) 373.8

*(a-, be-, to)weorpan* ‘throw’  
3<sup>rd</sup>.sg. *towi(e)rpð* CP (C) 70.22,  
244.20, 316.17, CP (H, C) 217.17,  
279.18, 311.11.13, CP (H) 215.18,  
445.18, *(to)wyrpð* CP (H) 71.22,  
245.20, 317.17, CP (C) 214.18

*weorðan* ‘become’  
2<sup>nd</sup>.sg. *wyrst* CP (H) 463.22  
3<sup>rd</sup>.sg. *werð* CP (H) 469.7, *wi(e)rð*  
38H, 48C *wyrð* 26H, 3C, 3Or

*berstan* ‘break’  
3<sup>rd</sup>.sg. *(ut)abirst* 1H, 3C, *-biersð* 2H

*bregdan* ‘to move quickly’  
3<sup>rd</sup>.sg. *wiðbritt* CP (H, C) 71.18, 361.2

*stregdan* ‘disperse’  
3<sup>rd</sup>.sg. *tostret(t)* CP (H, C) 283.19

## Syncopated

*sāwan* ‘sow’  
3<sup>rd</sup> sg. *sæwð* 4HC

### (A1.1.2) Light stems

#### Class IV (Cosijn 1888: §92)

## Unsyncopated

(*a-*, *for-*, *ge-* to) *beran* ‘bear’  
3<sup>rd</sup> sg. (*for*) *bireð* CP (H, C) 5H, 4H

*helan* ‘conceal’  
3<sup>rd</sup> sg. *heleð* 1HC

*cuman* ‘come’  
3<sup>rd</sup> sg. (*forð*) *cymeð* CP (H, C) 67.1, 73.9, 87.19, 107.21, CP (H) 313.10

## Syncopated

(*a-*, *for-*, *ge-* to) *beran* ‘bear’  
3<sup>rd</sup> sg. (*for*) *birð* 2H, 5C, (*for*) *bierð* 6H,  
*byrð* 1C

*ābrečan* ‘break’  
3<sup>rd</sup> sg. (*ā*) *bricð* CP (H, C) 277.11,  
279.16, *ābrycð* CP (C) 218.17

*cwelan* ‘die’  
3<sup>rd</sup> sg. *acwilð* CP (H) 445.25

*helan* ‘conceal’  
3<sup>rd</sup> sg. *hilð* 2H

(*be*) *niman* ‘take’  
3<sup>rd</sup> sg. (*ge*) *nimð* 4H, 1C

*bestelan* ‘steal away’

3<sup>rd</sup> sg. *be-*, *bistilð* CP (H, C) 283.3

*cuman* ‘come’  
3<sup>rd</sup> sg. (*be-*, *to-*) *cymð* CP (H, C) 11.19,  
31.23, 33.2, 35.12, 57.6, 63.1, 75.1,  
121.14, 129.22, 133.2, 167.22, 187.6,  
189.7, 241.13, 225.23, 245.4.18,  
275.4, 281.24, 283.23, 299.16, 313.23,  
317.12, 329.2, 331.8, 341.5, 345.2,  
349.1, 355.10, CP (H) 307.3.16,  
407.23, 413.30, 433.2.27, 435.16,  
437.27.29, 455.13.14.23, 459.25,  
463.11, 218.17.18, 312.10. 43H, 32C

## ***Class V (Cosijn 1888: §94)***

### **Unsyncopated**

(a-, ge)biddan ‘beg’  
3<sup>rd</sup> sg. bideð 3C

(ge)licgean ‘lie’  
3<sup>rd</sup> sg. li(e)geð 2H 1C 5Or

### **Syncopated**

etan ‘eat’  
3<sup>rd</sup> sg. itt 3HC, frit 1H

(a-, for)gi(e)fan ‘grant/forgive’  
3<sup>rd</sup> sg. (for)gi(e)fð 3HC

(ge)sprecan ‘speak’  
2<sup>nd</sup> sg. ðu forespr[i]csð CP (H) 399.31  
3<sup>rd</sup> sg. spricð 6H, 5C, 1Or, sprycð 1C

tredan ‘trample’  
3<sup>rd</sup> sg. trit 3H, 2C

(ge)wrecan ‘drive’  
3<sup>rd</sup> sg. wricð CP (H, C) 149.23, CP  
(C) 166.23, CP (H) 435.12, wriecð CP  
(H) 167.23

(a-, ge)biddan ‘beg’  
3<sup>rd</sup> sg. bidt 1H, bitt 3H

(ge)licgean ‘lie’  
3<sup>rd</sup> sg. (to, ymb)lið 1C 5Or 10 Chron

(be)sittan ‘sit’  
3<sup>rd</sup> sg. sitt 3H, 2C, sit 3H

*Cosijn §96*

*Contracted verbs*

gefēon ‘rejoice’  
3<sup>rd</sup> sg. gefihð CP (H) 417.2

sēon ‘see’  
3<sup>rd</sup> sg. gesi(e)hð 22H, 12C –syhð 1H  
3C

cweðan/cueðan ‘speak’  
2<sup>nd</sup> sg. ðu cuist CP (H, C) 331.2  
3<sup>rd</sup> sg. cuið CP (H) 27.23, 47.1, 99.14,  
111.5, 121.11, 145.11, 249.3, 247.20,  
329.2 for-, wið- cwið CP (H, C) 43.6,  
263.24, 329.8, CP (H) 407.33, 409.33,  
423.34, 453.2, 459.33, 461.1, 463.24,  
CP (C) 46.12, 110.5, 120.11, 144.11,  
248.3, 246.20, 328.2

## ***Class VI***

### **Unsyncopated**

faran ‘travel, to set forth’  
3<sup>rd</sup> sg. færeð 1C, fereð 1H

(ofer-, upa)hebban ‘heave’

3<sup>rd</sup> sg. (a-, upa) -hefeð 7H 1C

## Syncopated

Cosijn 1888: §98

*dragan* ‘drag’

3<sup>rd</sup> sg. *drægð* CP (H) 431.21

*faran* ‘travel, to set forth’

3<sup>rd</sup> sg. *færð* 6H 4C

*forsacan* ‘reject’

3<sup>rd</sup> sg. *for-, wiðsæcð* 5H 3C

*āspanan* ‘allure’

3<sup>rd</sup> sg. *spænð* 3H 1C, *forspenð* 1H

(A1.2) Weak indicative present in  
EWS (Class 1) (Cosijn 1888: §125)

(A1.2.1) Short syllables

*gebyrian* ‘to pertain to’

*gebyreð* CP (H, C) 39.6, 41.21,

105.19, 109.25 etc. 24 H 17 C

*derian* ‘to injure’

*dereð* CP (H, C) 31.10, 115.3, 173.19,

CP (C) 236.10 etc. 10 H 8 C

*deret* CP (H) 237.10

*ferian* ‘to carry’

*fereð* CP (H, C) 369.13

*herian* ‘praise’

*hereð* CP (H, C) 347.8, 373.2, CP (H)

457.27

(a-, on)*styrian* ‘to stir’

-*styreð* CP (H, C) 63.13, 79.20, 175.7,

189.3, 225.24, 285.22

(b) *fremman* type

*fremman* ‘to perform’

(of-, wið)*slēan* ‘strike/slay’

3<sup>rd</sup> sg. *of- utasli(e)hð* 8H, 6C (-*fliehð*

CP (C) 70.6, *ofslieð* CP (H) 167.1)

(ofa) *ðwēan*, -*ðuēan* ‘wash’

3<sup>rd</sup> sg. (a) *ðwi(e)hð* 6H 3C

(ofer-, upa)*hebban* ‘heave’

3<sup>rd</sup> sg. (a-, upa)*hefð* 6H 6C

*stæppan* ‘go/advance’

3<sup>rd</sup> sg. *stæpð* 3HC

*standan/stondan* ‘stand firm’

3<sup>rd</sup> sg. (ge-, for-, wið)*stent* 18H, 8C

\*According to Cosijn (1888), syncope  
occurs after *s* and *t*

(a) *nerian* type

(ge)*fremeð* CP (H, C) 73.13, 351.1,

CP (H) 407.7

*gremian* ‘to provoke’

(ge)*gremeð* CP (H, C) 63.13, CP (C)

218.14, CP (H, C) 289.6

*temian* ‘to tame’

*temeð* CP (H) 433.12

*trymman* ‘to make strong’

*trymeð* CP (H) 309.12

*dwellan* ‘to mislead’

(ge)*dweleð* CP (H, C) 89.8, 93.20,

95.20

*behelian* ‘to cover’

*beheleð* CP (H, C) 241.20

*cnyssan* ‘to trouble’

***cnysð*** CP (H, C) 143.19

*hwettan* ‘to whet, sharpen’  
*hwett* CP (C) 186.5, *hwæt* H

*lettan* ‘to hinder’  
*(ge)lett* CP (H, C) 257.5.22, CP (C)  
256.4, *lætt* CP (H) 257.4

*settan* ‘to set’  
*geset* CP (H, C) 193.20, *onsett* CP (H)  
383.

### (A1.2.2) Long syllables

\*According to Cosijn (1888), syncope is the rule and the unsyncopeated ones represent ‘exceptions’.

#### (a) Roots ending in -r

*gebæran* ‘to bear oneself’  
*gebærð* CP (H, C) 225.17

*c(i)erran* ‘to turn’  
*ge-, beci(e)rð, -cerð* CP (H, C) 121.24  
CP (H) 433.5.7

*gehīeran* ‘to hear’  
*gehierð* CP (H, C) 111.11, 229.21,  
267.12, CP (H) 427.16

*læran* ‘to teach’  
***forlæreð*** CP (H, C) 239.16  
*(ge)lærð* CP (H, C) 27.12, 81.8, 85.11,  
163.6, 193.12.14, 225.25, 227.1, 255.12,  
257.14, 275.6, 373.9, 381.4, CP (H)  
381.22, 451.3, 453.15, 455.4, 463.30

*(a)mierran* ‘to misguide’  
***amierreð*** CP (H) 39.1, *(a)mi(e)rð* CP  
(C) 38.1, CP (H, C) 97.17, CP (H)  
401.17, 453.4

*(up)aræran* ‘to raise up’  
*(up)arærð* CP (C) 122.13, 162.12,  
346.9, *-ræð* H

*scīran* ‘to declare’  
*scirð* CP (H, C) 329.7

*stīeran* ‘to steer’  
*(ge)sti(e)rð* CP (H, C) 53.16, 79.15,  
275.6  
***stiereð*** CP (H, C) 269.14, CP (H) 433.4

#### (b) Obstruent+sonorant clusters

*atiefran* ‘to paint’  
***ati(e)freð*** CP (H, C) 157.13

*timbran* ‘build’  
***timbreð*** CP (H) 383.32

*hyngri(i)an* ‘to hunger’

***hyngreð*** CP (H, C) 283.12

*bīcnan* ‘to make a sign’  
***bicneð*** CP (H, C) 357.20

*gedieglan* ‘to hide’  
***gediegleð*** CP (H) 451.19

#### (c) Root-final m

*dēman* ‘judge’  
*demð* CP (H, C) 39.11, ***demeð*** CP (H)  
401.30

*afliēman* ‘cause to flee’  
*afliemð* CP (H) 455.33



*gīeman* ‘to take care of’  
*gi(e)mō CP (H, C)* 61.8, 139.1, *CP (H)*  
 345.12  
*gemō CP (C)* 344.12, ***giemeō CP (H, C)***  
 141.16

*cwielman* ‘to torment’  
*cwilmō CP (H, C)* 61.7

*hrēman* ‘to cry out’  
*hremō CP (H)* 429.1

*wiōtremō CP (H)* 441.27 (*wiōtremman*)

#### (d) Root-final n

*forbærnan* ‘to burn up’  
*forbærnō CP (C)* 222.22

*giernan* ‘to desire’  
*gi(e)rneō CP (H, C)* 55.21, *gi(e)rnō CP*  
*(H, C)* 331.15, *CP (H)* 395.20

*hī(e)nan* ‘to humble’  
*hi(e)nō CP (C)* 116.16, 218.19, *henō CP*  
*(H)* 117.16

*nemnan* ‘to name’  
***nemneō Chron.*** 519, 584, ***nemneō Or***  
 10.1.3

*striēnan* ‘to gain’  
*strienō CP (H, C)* 55.10

*geōwēnan* ‘to soften’

*geōwēnō CP (H, C)* 137.8

*wēnan* ‘to suppose’  
*ðu wenst CP (H)* 463.21, *wenstu CP (H)*  
 63.1, 113.25, 231.23, 425.1, 459.10,  
*wenst ðu CP (C)* 112.25, 230.23,  
***wenestu CP (H)*** 405.12, ***wenest ðu CP***  
*(C)* 62.1  
 3 sg. *wenō CP (H)* 69.22, *CP (H, C)*  
 111.14.16, 121.15, 185.25, 187.10,  
 285.2, *CP(H)* 391.7.24.25, 451.25,  
 457.11, ***weneō CP (H, C)*** 149.10, *CP*  
*(C)* 68.22

*wiernan* ‘to hinder’  
*(for)wi(e)rnō CP (H, C)* 257.9, 377.19,  
 379.1, 381.6, *CP (H)* 391.19.26.35,  
 411.30

#### (e) Root-final l

*onāēlan* ‘to kindle’  
*onælō CP (H, C)* 259.12, 291.8

*(be-, to)dāēlan* ‘to deal’  
*(be-, to)dælō CP (H)* 69.23, *CP (H, C)*  
 323.15, 335.23, 341.6, *CP (H)* 423.5  
***bedæleō CP (C)*** 68.23

*fyllan* ‘to fill’

*(ge)fylō CP (H, C)* 93.2, 251.5.6, 291.7  
***gefylleō CP (H, C)*** 283.24

*(a)gāēlan* ‘to hinder’  
*(a)gælō CP (H, C)* 257.6.6, 283.25, *CP*  
*(H)* 445.29

*(ge)hāēlan* ‘to heal’

(ge)hæld CP (H, C) 125.10, 183.22,  
261.1 (geheald ‘salvat’ CP (H) 399.15)  
**gehæleð** CP (H, C) 261.13

gestillan ‘to rest’  
gestilð CP (H, C) 183.22

(e) Root-final <g>

gebīegan ‘to bow’  
gebigð CP (H, C) 29.17, **gebiegeð** CP  
(H) 401.4

gebrēgan ‘to frighten’  
gebregð CP (H) 463.31

cīegan ‘to call’  
geciegð CP (H, C) 39.9  
ciegeð CP (H) 407.11.14

adrygan ‘to dry up’

(f) Root-final f

gedrēfan ‘to disturb’  
**gedrefeð** CP (H) 37.13  
gedrefð CP (C) 36.13, CP (H, C)  
169.13, 227.19, CP (H) 425.27

gehwierfan ‘to cause to go’  
gehwi(e)rfð CP (C) 122.13, CP (H, C)  
249.23, CP (H) 255.15, 387.24  
gehwyrfð CP (H) 123.13  
**gehwierfeð** CP (C) 254.15

(g) Root-final ð

(ge)cȳðan ‘to inform’  
(ge)cȳð CP (H, C) 156.21, 163.15,  
369.12, CP (H) 427.25  
gecyðð CP (H, C) 163.11, CP (C) 358.7

**gestilleð** CP (H, C) 173.21

tælan ‘to blame’  
tælð CP (H, C) 117.22, 273.1, CP (H)  
453.3

adrygð CP (H) 419.15

(ofer)fylgan ‘to pursue, attack’  
(ofer)fylgð CP (H, C) 71.20, CP (H)  
145.9, CP (H, C) 167.15, CP (H) 407.8  
**fylgeð** CP (C) 144.9

gemengan ‘to mingle’  
gemengð CP (H, C) 269.3

wiergan ‘to curse’  
wiergð CP (H, C) 377.13

læfan ‘to leave’  
læfð CP (H, C) 317.4

a-, gelīefan ‘to trust’  
a-, geliefð CP (H) 111.11, CP (H, C)  
331.20, CP (H) 403.26, 437.26  
**geliefeð** CP (C) 110.11  
alief(ð) CP (H) 391.24

gekyðð CP (H) 359.7

gesmēðan ‘to make smooth’  
gesmeð CP (H, C) 125.10

*forswīðan* ‘to overcome’

**(h) Root-final s**

*(be)rāsan* ‘to rush’

*ræsð CP (H, C)* 149.12

*beræsð CP (C)* 142.6 -st H

**(i) Root-final t/d**

*ge-, ofer-, tobrædan* ‘broaden’

*ge-, to-, oferbræt CP (H, C)* 337.13.15,  
*CP (H)* 405.9, 407.12

*cīdan* ‘to chide’

*cit CP (H, C)* 185.14

*fēdan* ‘to feed’

*fet CP (H)* 303.1

*gefrēdan* ‘to feel’

*gefred CP (H)* 139.18, 249.7, 407.25

*gefret CP (C)* 138.18, 248.7, *CP (H)*  
431.19.22, 441.10

*hlȳdan* ‘to sound’

*hlyt CP (H, C)* 347.5

*hȳdan* ‘to hide’

*(ge)hyt CP (H, C)* 337.9, 377.9, *CP (C)*  
184.25, *CP (H, C)* 187.5.9, *CP (C)*  
376.13, *CP (H, C)* 243.9.10, 241.12

*hytt CP (H)* 377.13

*hyd CP (H)* 185.25

*lædan* ‘to lead’

*lædeð CP (C)* 28.8

*læt CP (H)* 29.8, *CP (H, C)* 133.20, *CP*  
*(C)* 294.20, *CP (C)* 449.30

*gelæd CP (H)* 295.20

*forswið CP (H)* 387.22

*wyrmsan* ‘to produce corrupt matter’

*wyrmseð CP (H, C)* 153.3

*(ge)ēaðmēdan* ‘to adore’

*(ge)eaðmed CP (H)* 79.16, 425.29, -met  
*CP (C)* 78.16, *CP (H)* 391.31

*genīedan* ‘to force’

*geniet CP (H, C)* 93.10, *CP (C)* 220.11

*ge-, underðīedan* ‘to render subject’

*ge- underðied CP (H)* 103.17, 417.24, -  
*iet CP (C)* 102.17, *CP (H)* 421.6

*bīeldan* ‘embolden’

*bi(e)lt CP (H, C)* 129.11

*ablendan* ‘to blind’

*ablent CP (H, C)* 129.15

*forieldan* ‘to put off’

*foriet CP (C)* 283.25

*forielð C*

*gelendan* ‘to approach’

*gelent CP (H)* 445.13

*(ge)sci(i)endan* ‘to disfigure’

*gesc(i)ent CP (C)* 66.8, *CP (H, C)* 69.9,  
*CP (C)* 206.6, *CP (H, C)* 215.16, *CP*  
*(H)* 411.32

*gesci(e)nd CP (H)* 67.8, 207.6

*sendan* ‘to send’  
*sent* CP (H) 307.18

*forspildan* ‘to destroy’  
***forspildeð*** CP (C) 332.9  
*forspildt* CP (H) 333.9

(*a-*, *ge*)*wendan* ‘to turn’  
***awendeð*** CP (C) 54.13  
*gewend* CP (H) 225.22  
(*a-*, *an-*, *ge*)*went* CP (H) 55.13, CP (C) 224.22, CP (H, C) 227.6.15, CP (H) 395.17, 403.4.5, 407.7, 411.24

*gewildan* ‘to tame’  
*gewilt* CP (C) 218.17

*awierdan* ‘to corrupt’  
*awiert* CP (H) 415.24

*gebētan* ‘to improve’  
*gebett* CP (H) 35.9, CP (C) 272.21, CP (H) 423.35, 437.27  
*gebet* CP (C) 34.9, CP (H) 273.21

*gebi(e)rhtan* ‘to brighten’  
*gebi(e)rht* CP (H, C) 369.15

*ēhtan* ‘to pursue’  
*ðu ehtst* CP (H) 443.24  
3 sg. *eht* CP (C) 362.3 (eft H)

(*be-*, *gelif*)*fæstan* ‘to fasten’  
*-fæst* CP (H, C) 313.1, CP (C) 316.3.19, CP (H) 465.2, CP (C) 258.12  
*-fæsð* CP (H) 317.3.19, 259.12

*grædan* ‘to cry’  
*græt* CP (H) 459.32

*grētan* ‘to greet’  
*gret* CP (H, C) 175.9  
*grett* CP (C) 292.19 (recte H grete)

*agyltan* ‘to offend’  
*agylt* CP (H, C) 347.18

*gehæftan* ‘to take’  
*gehæft* CP (H, C) 273.17, 283.16

*hlystan* ‘to listen’  
*hlyst* CP (H, C) 97.1

(*on-*, *geond*)*lēhtan* ‘to cause to shine’  
*-li(e)ht* CP (H, C) 243.17.21, 259.10.11.12, 365.15, 369.15

*lystan* ‘to desire’  
*lyst* CP (H, C) 279.6.7, CP (C) 350.8, CP (H) 441.22, 445.29, Or 102.25  
*lysð* CP (H) 351.8, 391.25

*gemētan* ‘to find out’  
*gemett* CP (C) 272.17, CP (H, C) 283.24  
*gemet* CP (H) 273.17, 415.24

*gemieltan* ‘to melt’  
*gemielt* CP (H, C) 259.6

*hine (ge)restan* ‘to rest’  
*resteð* Chron. 716  
*gerest* CP (H) 463.10  
*restð* CP (C) 142.21  
*resð* CP (H) 143.21

*swāetan* ‘to sweat’  
*swæt* CP (H, C) 285.13

*gesuētan* ‘to sweeten’  
*gesuet* CP (H) 303.13

*tyhtan* ‘to stretch’

*tyht CP (H, C)* 129.10, 289.5

**(j) Root-final w**

*sierwan* ‘to devise’

*ge-, ymbsireð CP (H)* 435.5.6

*geortrīewan* ‘to trust’

*geortreowð, -triewð CP (H)* 447.9.11

**(k) Root-final p**

*beclippan* ‘to challenge’

*beclipð CP (H)* 389.11.14

*ascirpð, ascyrpð CP (H, C)* 69.8

*ascirpan* ‘to sharpen’

*geyppan* ‘to open’

*geypt CP (C)* 220.10

**(l) Root-final affricate**

*(ofer)drenčan* ‘over drench’

*(ofer)drencð CP (H, C)* 261.14, 369.10, 381.4

*screnc(ð) CP (H)* 453.3

*geīecan* ‘to increase’

*gei(e)cð CP (H, C)* 93.21, *CP (H)* 411.30, 429.15

*swencan* ‘to trouble’

*(ge)swencð CP (H, C)* 347.7, *CP (H)* 391.20

*scēncan* ‘to break’

*scencð CP (H)* 451.24

*ge-, ofðryccan* ‘to oppress’

*ge-, ofðrycð CP (H)* 67.13, *CP (H, C)* 77.21, *CP (H)* 389.13, 239.15, 455.25

*a-, gescrencan* ‘to cause to shrink’

*ascrenceð CP (H)* 415.11

*gescrencð CP (H, C)* 73.2

*ofðryceð CP (C)* 66.13 (the latter form incorrectly formed according to Cosijn 1888)

**(m) Root-final <sc>**

*adwāscan* ‘to extinguish’

*adwāscð CP (H, C)* 279.11, *CP (H)* 427.7

*geðryscð CP (H, C)* 239.17, *CP (C)* 238.15

*geðryscan* ‘to oppress’

*wȳscan* ‘to wish’

*wyscð CP (C)* 220.15

*(n) polysyllables*

*ondettan* ‘to confess’

*ondetteð* CP (H, C) 105.20

*līcettan* ‘to feign’

*licet* CP (H, C) 11.14, 27.4, 55.8.24, 225.11, 269.4, (C) 54.15, 56.1, 120.22, 220.24, (H) 453.5, *licett* (C) 55.15, 57.1, 121.22

*onettan* ‘to hasten’

*onet* CP (H, C) 93.18

*scofettan* ‘to drive’

*scofett* CP (H) 169.13, *-eð* C (I)

*ōleccan* ‘to soothe’

*olecð* CP (H, C) 183.22, 313.12, (H) 463.9,

*nēalācean* ‘to approach’

*-lācð* CP (H) 461.3

(A1.2.3) *Sellan* type (Wright & Wright 1925: §534)

*\*Preterite not relevant for syncope, but present is similar to other Class 1 forms*

*geleccan* ‘to moisten’

*gelecð* CP (H, C) 137.8

*recc(e)an* ‘to recount’

*recð* CP (H, C) 65.9, 113.22

*gerecð* CP (H, C) 333.14

*sellan* ‘to give’

*selð* CP (H, C) 327.(4.10.20.21.23), 369.(10.11.13), 335.23, CP (C) 368.13, CP (H) 397.3

(ge)*seleð* CP (H, C) 249.24, 361.22, CP (H) 369.13

*stellan* ‘to give a place to’

*steleð* CP (H, C) 191.12

*atellan* ‘to reckon’

*ateleð* CP (H) 463.12

*weccan* ‘to wake’

*wecð* CP (H) 461.14

*secgan* ‘to say’ Class 3

(a-, ge-, fore)sægð CP (H, C) 163.7.13, 225.23, 273.20, 295.4, CP (H) 443.25, Or 46.33, 50.20, 128.23

*lecgan* ‘to lay’ *settan* type

*legeð* CP (H) 143.14, CP (H, C) 343.20, CP (H, C) 342.20, 342.21

*legð* CP (C) 142.14, CP (H) 343.20, 293.17

*leget* CP (H, C) 343.21 (*liegeð* CP (C) 292.17)

*gerācean* ‘to reach’

*geræcð* CP (H) 463.13

*recean* ‘reckon’

*recð* CP (H) 421.14, 451.26

*sēcean* ‘to seek’

*secð* CP (H, C) 55.2.9, CP (C) 66.6, CP (H, C) 153.6, 161.22, 225.20, 227.14,

251.14, 259.10, 351.9, 371.24, *CP (H)*  
 399.5, 451.15, 463.34, *Or* 136.30  
*sec[ð]* *CP (H)* 67.6 (*secð ðæt smealīcor*)

*wyrcean* ‘to work, make’  
*(ge)wyrceð CP (H, C)* 71.10.24, 157.15,  
 163.5, 269.3, 283.8, *CP (H)* 435.22, *Or*  
 8.18, 12.23

*ðencan* ‘to think’  
*ðenceð CP (H, C)* 55.12, *CP (C)* 154.25  
*(ge)ðencð CP (H, C)* 11.14, 55.15.19.20,  
 57.16, 77.18, 79.14, 107.1.22, *CP (H)*

155.25, *CP (H, C)* 227.23, 343.21, *CP*  
*(H)* 415.35, 447.17, 451.17

*ðyncean* ‘to think’  
*(ge-, of)ðyncð CP (H, C)* 7.6.6, 57.6,  
 85.26, 105.24, 129.1, 161.2, 177.18.19,  
 203.15, *CP (C)* 204.14, *CP (H, C)*  
 225.19, 227.21, 231.20, 241.4, 285.4,  
 295.4, *CP (H)* 415.31.32.34, 427.26.27,  
 449.14, *Or* 92.27, 94.30, 182.22  
*ðynceð CP (H, C)* 321.24, *CP (C)* 24.9  
*ðyncet CP (H)* 25.9 (*ðync ðætte CP (H)*  
 203.14)

## Appendix A2

### Present indicative verbs in Lindisfarne

Data are taken from Cook’s (1894) glossary. Tokens are listed under their infinitive form, and arranged according to number, person and tense. The tokens in this appendix include the weak and strong 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> sg.pres.ind. The 1<sup>st</sup> person is relevant to high vowel apocope, and the 2<sup>nd</sup>/3<sup>rd</sup> person is relevant as far as high vowel syncope is concerned. The classes of verbs prone to syncope I, II, VII III, which has a heavy consonant cluster. The classes of verbs that are not expected to undergo syncope are those with short stem vowels, including classes IV, V and VI.

#### (A2.1) Strong verbs

##### (A2.1.1) Light forms

#### Class IV

*beran* ‘bear’  
 3<sup>rd</sup> sg.pres.ind. *beres* Mk. 13.14, L.  
 14.27, *bereð L. 1.13*

*becuman* ‘become’  
 1st sg.pres.ind. *bicymo Mt. I* 7.2  
 3<sup>rd</sup> sg.pres.ind. *becymeð Mk. 11.24*

*cuman* ‘come’

1st sg.pres.ind. *cymo* Mt. 8.7, L. 19.13,  
 J. 5.7, 8.14, 14.28, 17.11, 17.13, 21.23,  
*cymmo* J. 14.18, *cymo* J. 14.3  
 2<sup>nd</sup> sg.pres.ind. *cymes* Mt. 3.14, L.  
 23.42  
 3<sup>rd</sup> sg.pres.ind. *cymeð* Mt. I. 10.1, 8.9,  
 24.50, Mk. 4.15, 4.22, 8.38, 9.13, 12.9,  
 15.36, L. 3.16, 6.47, 7.8, 9.26, 12.36,  
 12.38, 12.40, 12.43, 12.46, 12.54, 14.9,  
 14.26, 14.27, 14.31, 17.20, 18.5, 20.16,

J. 1.30, 6.37, 6.45, 7.31, 7.50, 9.4,  
11.56, 15.26, 16.2, 16.25, *cymmeð* Mt.  
24.5, L. 17.20, J. 3.21, *cymað* J. 3.8,  
*cymed* L. 8.17, *cymmes* Mt. 24.14, J.  
5.25, *cymes* Mt. 18.7, 24.46, 25.31, Mk.  
1.7, 9.12, 13.35, L. 12.37, 18.8, J. 3.20,  
5.24, 5.43, 6.35, 10.10, 12.15, 16.4, 16.7

*wilcyma*

1st sg.pres.ind. *wilcymo* Mt. 25, 23

*beforacuman*

1st sg.pres.ind. *bef'a cymo* Mk. 14.28

*forcuma*

3<sup>rd</sup> sg.pres.ind. *f'cymeð* L. 11.22

*forecuma*

3<sup>rd</sup> sg.pres.ind. *f'ecymð* L. 11.20

*gecuma*

3<sup>rd</sup> sg.pres.ind. *gecymeð* L. 12.38, 14.10,  
18.3, J. 14.25, 16.8, 18.2, *gecymmes* Mk.  
13.36, *gecymes* J. 7.27, 16.13

*fromnioma* 'take'

3<sup>rd</sup> sg.pres.ind. *fronimeð* Mk. 2.21

*gebreca* 'break'

3<sup>rd</sup> sg.pres.ind. *gebreceð* Mt. 21.44

## Class V

*cw(o)eðan* 'speak'

-o

1st sg.pres.ind. *cuoedo* Mt. (x11), L.  
(x15), J. (x19), *cueðo* Mt. (x33), Mk.  
(x13), L. 3.8, 12.51, J. (x15), *cuedo* Mt.  
17.20, *cuoedo* J. 16.26, *cuæðo* J. 12.49,  
16.20

*sōðcuma*

3<sup>rd</sup> sg.pres.ind. *soðcymes* J. 15, 26

*ofcuma*

3<sup>rd</sup> sg.pres.ind. *ofcymes* Mt. 2, 6;  
*ofcimes* Mt. 15, 11

*incuma*

3<sup>rd</sup> sg.pres.ind. *incymeð* L. 18, 17

*genioma* (*niman*) 'take'

3<sup>rd</sup> sg.pres.ind. *geniomað* Mk. 4, 15

*geniomas* Mt. 19,12; *genimeð* Mt.

12,29. L. 6,29. 11,22. J. 11,48; *genimes*  
Mt. 9, 16. J. 15, 2 mg.

*nioma*

1st sg.pres.ind. *nimo* J. 12, 32

2<sup>nd</sup> sg.pres.ind. *nimes* J. 10, 24

3<sup>rd</sup> sg.pres.ind. *nimeð* Mt. 10, 38. L. 13,

33. J. 1,29. 8,37. 10,12. 10,18. 10,28.

15,2.16,22; *nīmeð* L. 6, 30; *nimmes* L.

19,22

*tócuma* sv. IV

3<sup>rd</sup> sg.pres.ind. *tocymeð* Mt. 6, 10;

*tocymæð* L. 11,2;

-ø

*cuoed* Mk. 11.23, L. 12.22, 19.26, *cueð*  
Mt. 6.5

2<sup>nd</sup> sg.pres.ind. *cueðestu* M. 7.4,

*cuoedestu* J. 1.22, *cuiðestu* Mt. 7.9,

7.10, 7.16, *cuoedest* L. 12.41, *cuoðes*

Mk. 5.31, 15.2, L. 18.19, 20.21, 22.60,



23.3, J. 12.34, 18.34, 18.37, *cwoeðes*  
Mk. 14.68, *cuoeðas* Mt. 24.48, L. 8.45,  
*cuoeðæs* J. 14.9, *cuoðas* Mk. 10.18,  
*cueðes* Mt. 27.11, J. 8.33, 8.52, 16.29,  
*cuæðes* J. 8.5

3<sup>rd</sup> sg.pres.ind. *cuoeðas* Mk. 7.11, 11.3,  
11.23 (2), 12.35, 13.21, L. 12.10, 18.37,  
(mg?/?), *cuoeðes* Mt. 25.40, Mk. 15.28,  
L. 11.5, 13.27, 14.9, *cuoeðæs* L. 12.45,  
*cuoeðeð* L. 13.25, 17.7, 17.8, 20.5,  
*cuoeðað* L. 14.10, *cueðas* Mt. 5.22 (2),  
15.5, 21.25, 24.23, J. 19.35, *cueðes* Mt.  
I. 22.6, 12.32, 25.34, *cueðæs* Mt. 7.21,  
*coeðes* Mt. 25.41, L. 22.11, *cuæðes* J.  
6.42

*yflecwoeða*

3<sup>rd</sup> sg.pres.ind. *yflecwoeðæs* Mt. 15.4

*becwoeða*

3<sup>rd</sup> sg.pres.ind. *becwoeð* Lk. I. 5.3

*gecwoeða*

3<sup>rd</sup> sg.pres.ind. *gecwoeðað* L. 23.34,  
*gecweðas* J. 2.5, *gecweðæs* Mt. 12.32

*miscwoeða*

3<sup>rd</sup> sg.pres.ind. *miscwoeðas* Mk. 7, 10

*wīðcwoeða*

3<sup>rd</sup> sg.pres.ind. *wīðcwoeðæs* J. 19, 12;

treda sv. 'to tread' V

3<sup>rd</sup> sg.pres.ind. *tred* . . , Mt. 21, 33 mg<sup>55</sup>

*biddan* 'ask'

1st sg.pres.ind. *biddo* Mt. 26.36, L.  
8.28, 9.38, 14.18, 14.19, 16.27, J. 17.9  
(x2), 17.15, 17.20

3<sup>rd</sup> sg.pres.ind. *biddes* Mt. 7.8

*eatta* 'eat'

1st sg.pres.ind. *eto* L. 17.8

3<sup>rd</sup> sg.pres.ind. *ettes* Mt. 11.19, Mk.

2.16, *eteð* Mk. 11.14, 7.33, 7.34, J.

10.10, *etað* L. 15.2, *ettað* L. 14.15, *ettæs*

Mk. 14.18

*forgeafa* 'forgive'

1st sg.pres.ind. *f'gefo* Mt. 18.21, Mk.

15.9, L. 23.16

3<sup>rd</sup> sg.pres.ind. *f'gefes* Mt. 6.14, 6.15,

Mk. 11.26, *f'gefæð* Mk. 11.25, *f'gefēð*

L. 7.49

*gebidda*

1st sg.pres.ind. *gebiddo* J. 14.16

3<sup>rd</sup> sg.pres.ind. *gebidded* L. 14.32

*sitta* 'sit'

1st sg.pres.ind. *sitto* Mt. I 1, 2

3<sup>rd</sup> sg.pres.ind. *sitted* L. 14.28, 14.31;

*sittes* Mt. 19.28, 25.31; *sittæs* Mt. 23,

22

*geatta* 'eat'

2<sup>nd</sup> sg.pres.ind. *geetes* L. 17.8

*ðerhgebidda*

3<sup>rd</sup> sg.pres.ind. *ðerhgebiddes* L. I 7,4

*gespreca* sv. 'speak' V

3<sup>rd</sup> sg.pres.ind. *gespreces* J. 3,34

*spreca*

1st sg.pres.ind. *spreco* (13 times);

*sprecco* J. 8,26, 10,25, 12,50; *sprec' J.*

<sup>55</sup> The form written in the margin in Mt. 21.33mg: 'tred...' has not been counted, as the status of the vowel is unclear.

**16, 25; *sp'* J. 12, 49;**

2<sup>nd</sup> sg.pres.ind. *spreces* Mt. 13, 10. J. 4, 27. 16, 29; *sprecces* J. 19, 10;

3<sup>rd</sup> sg.pres.ind. *sprecað* J. 3, 31. 7, 26.

8, 44; *spreceð* J. 1 5, 6. 7, 18. 8, 44.

16, 18; *sprecas* Mt. 12, 34; *spreces* Mt.

10, 20. L. I 3, 14. 5, 21. 6, 45. J. 9, 37.

16, 13; *sprecæs* Mt. I 5, 12; *sprecces* J.

16, 13

*wræca* 'avenge' V

1st sg.pres.ind. *wræco* L. 18, 5

*brecca* 'break' V (confrincet in Lat.)

3<sup>rd</sup> sg.pres.ind. *breceð* Mt. 12.20

## Class VI

*onsacca* 'refute' VI

1st sg.pres.ind. *onsæcco* Mt. 10, 33. 26, 35. Mk. 14, 31;

2<sup>nd</sup> sg.pres.ind. *onsæcest* Mt. 26, 75;

*onsæccet* L. 22, 34. 22, 61;

*onsæcces* J. 13, 38;

3<sup>rd</sup> sg.pres.ind. *onsæccað* L. 9, 23. 12, 9;

*onsæcæð* L. 14, 33; *onsæccas* Mt.

10, 33; *onsæcces* J. I 3.4

*tógægnescfara*

3<sup>rd</sup> sg.pres.ind. *togægnescfæres* Mk.

16, 7

*ūtfara*

3<sup>rd</sup> sg.pres.ind. *utfæreð* J. 10, 9

*ðerhoferfara* sv.

3<sup>rd</sup> sg.pres.ind. *ðerhof'færeð* L. 2, 35

*āhebban* 'exalt'

2<sup>nd</sup> sg.pres.ind. *ahefes* Mt. 11.23

3<sup>rd</sup> sg.pres.ind. *ahefeð* Mt. 12.35, 23.12,

*inbegeatta* 'confess'

3<sup>rd</sup> sg.pres.ind. *inbigēates* Mt. I 9, 13

*ongeatta* sv. 'confess'

1st sg.pres.ind. *ongetto* J. 10, 14. 10, 15. 10, 27;

2<sup>nd</sup> sg.pres.ind. *ongettes* Mt. 16, 23;

3<sup>rd</sup> sg.pres.ind. *ongetteð* J. 7, 17;

*begeatta* (weak in *bt*)

2<sup>nd</sup> sg.pres.ind. *begettes* Mt. 17.27

3<sup>rd</sup> sg.pres.ind. *begettes* Mt. 10.39

*licga* V 'to lie down'

3<sup>rd</sup> sg.pres.ind. *liges* Mt, 8, 6

L. 6.45, J. 13.18, *ahefes* Mt. I. 19.16,

12.35, 13.52, *ahebbað* L. 14.11, 18.14,

*ahebbeð* L. 6.45

*beforefara* 'travel'

2<sup>nd</sup> sg.pres.ind. *bef'efares* Lk. 1.76

*faran* 'travel'

1st sg.pres.ind. *færo* J. 14.3, 16.7, 16.17

2<sup>nd</sup> sg.pres.ind. *faeris* J. 11.8, *færes* Mt. 8.19

3<sup>rd</sup> sg.pres.ind. *færes* Mt. 15.17, L.

16.30, *faeres* Mt. 8.9, J. 13.3, *færæs* J.

12.19, *færeð* Mt. 5.30, *færað* J. 3.8

*infara*

3<sup>rd</sup> sg.pres.ind. *innfæreð* J. 10, 9

*forfara*

3<sup>rd</sup> sg.pres.ind. *f'færas* Mt. 10.39

*forestonda* 'defend'

3<sup>rd</sup> sg.pres.ind. *f'estondes* Mk. 8.36

*forstonda*

3<sup>rd</sup> sg.pres.ind. *fʹstondes* Mt. 19.10, J.  
6.63

*gefara* ‘die’ 6

3<sup>rd</sup> sg.pres.ind. *gefæres* Mt. I. 9.12,  
17.20

*gehebban* ‘raise’ 6

3<sup>rd</sup> sg.pres.ind. *gehebbes* Mt. 12.11

*swoeriga*<sup>56</sup>

3<sup>rd</sup> sg.pres.ind. *suerias* Mt. 23, 18. 23,  
20. 23, 21; *suerias* Mt. 23, 22; *sueras*  
Mt. 23, 20. 23, 21. 23, 22

*geswoeriga* ‘swear’ VI

3<sup>rd</sup> sg.pres.ind. *gesuerias* Mt. 23, 16

---

<sup>56</sup> This form is also listed in B&T as weak, with *-ede* pret. This form may be Class 2 weak.

Light strong forms	apocopated	total	% apocopated
1st sg.pres.ind.	4 (+ 2 uncounted with abbrev. marks)	172 (-o in unapocopated forms)	172 (-o in unapocopated forms)

Light strong forms	syncopated	total	% syncopated
2 <sup>nd</sup> /3 <sup>rd</sup> sg.pres.ind.	1	269	

### (A2.1.2) Heavy stems

#### Class I

*rioppa*, *rippa* sv. ‘reap’ I  
 1<sup>st</sup> sg.pres.ind. *hrippo* Mt. 25, 26;  
 2<sup>nd</sup> sg.pres.ind. *hripes* Mt. 25, 24;  
*hrippes* L. 19, 21;  
 3<sup>rd</sup> sg.pres.ind. *hrioppað* J. 4,36(2). 4  
 37; *hrippes* L. 19,22;

*gristbitiga* ‘gnash’ (weak in B&T, but  
 noted as strong in Cook 1894).  
 3<sup>rd</sup> sg.pres.ind. *gristbitteð* Mk. 9, 18

*gestiga* sv. ‘ascend’ I  
 3<sup>rd</sup> sg.pres.ind. (opt?) *gestige* J. 5, 7;

*æthrinan* ‘touch’  
 3<sup>rd</sup> sg.pres.ind. *æthrineð* L. 16.13

*ārisan* ‘arise’  
 1st sg.pres.ind. *ariso* Mk. 14.28, L.  
 15.18, Mt. 27.63, *eftariso* Mt. 26.32,

3<sup>rd</sup> sg.pres.ind. *arises* Mt. 12.42, L.  
 16.31, *arisað* Mk. 4.27, 13.8, *ariseð* L.  
 1.78, 11.8 (2), 9.22, 11.31, J. 2.22, 7.52,  
*efnearisas* Mt. 24.7, *eftarisas* Mt.  
 17.23, *eftarisæs* Mt. 20.19, *eftarisað*  
 Mk. 9.31, 10.24, *eft ariseð* J. 11.23,  
*eftarisæð* J. 11.24

*āstigan* ‘move upward’  
 1st sg.pres.ind. *astigo* J. 7. 8, 20.17

3<sup>rd</sup> sg.pres.ind. *astiged* J. 10. 1

*āwritan* ‘write’  
 3<sup>rd</sup> sg.pres.ind. *auwritteð* J. 8.6

*beswican* ‘betray’  
 3<sup>rd</sup> sg.pres.ind. *besuicað* J. 7.12

*bitan* ‘bite’

3<sup>rd</sup> sg.pres.ind. *bites* L. 9.39

*drifan* ‘drive’

1st sg.pres.ind. *drifo* Mt. 12.28

3<sup>rd</sup> sg.pres.ind. *drifes* Mt. 12.24, 12.26,  
*drifeð* Mk. 3.22

*drincan* ‘drink’

1st sg.pres.ind. *drinco* Mt. 26.29 (x2),  
Mk. 10.38, 10.39, 14.25, L. 17.8, 22.18,  
J. 18.11

2<sup>nd</sup> sg.pres.ind. *dringes* L. 17.8

3<sup>rd</sup> sg.pres.ind. *dringes* Mt. 11.19,  
*drincað* Mk 2.16, L. 7.33, 7.34 (x2), J.  
2.10 (mg), 6.54, 6.56, *dringað* J. I. 5.7,  
*drinceð* L. 1.15

*fordrifa* ‘drive away’

1st sg.pres.ind. f<sup>r</sup>*drifo* Mt. 12.27

3<sup>rd</sup> sg.pres.ind. f<sup>r</sup>*drifes* Mt. 9.34

*gebīta* ‘bite’

3<sup>rd</sup> sg.pres.ind. *gebites* Mk. 9.18

*gedrincan* ‘drink’

3<sup>rd</sup> sg.pres.ind. *gedrincað* J. 4.13

*geflitta* ‘strive’

3<sup>rd</sup> sg.pres.ind. *geflittes* Mt. 12.19

*tódrīfa* ‘drive’

3<sup>rd</sup> sg.pres.ind. *todrifeð* J. 10, 12

*tóslīta* ‘slit’

1st sg.pres.ind. *toslito* L. 12, 18; *toslito*  
Mk. 14, 58;

3<sup>rd</sup> sg.pres.ind. *tóslittað* Mt. I 2, 10;  
*toslitteð* Mk. 2, 22; *toslitað* L. 5, 36;

*tosliteð*

L. 5, 37. 9, 39; *toslittes* Mt. 5, 19. Mk.  
15,29; *toslites* Mk. 9, 18

*slīta* sv.

3<sup>rd</sup> sg.pres.ind. *slittað* Mt. I 1, 8;

*hrīna* ‘to touch’

1<sup>st</sup> sg.pres.ind. <sup>h</sup>*rino* Mt. 9, 21. Mk. 5,  
28. 14, 27

*ofstīga* ‘to descend’

3<sup>rd</sup> sg.pres.ind. *ofstiges* Mk. 13, 15;  
*ofstiges* Mt. 24, 17

*fordwīnan* ‘dwindle’

3<sup>rd</sup> sg.pres.ind. *forduineð* L. 14.34

*oferwrīga* ‘to cover over’ (wreon)

3<sup>rd</sup> sg.pres.ind. *of<sup>w</sup>wrigað* L. 1, 35;

*scīna* sv. ‘to shine’

3<sup>rd</sup> sg.pres.ind. *scineð* L. 17, 24

*gescīna* sv.

3<sup>rd</sup> sg.pres.ind. *gescineð* J. 1,5; L. 9, 29.

*rīsa* sv.

3<sup>rd</sup> sg.pres.ind. *riseð* L. 6, 2; *rises* Mk.  
13, 14.

*gerīsa* sv. ‘to rise’

3<sup>rd</sup> sg.pres.ind. *gehriseð* L. 12, 12. 13,  
33. 17,25. 18,1; *ge<sup>h</sup>riseð* L. 5, 36;  
*geriseð* L. 13, 14. 22, 37. J. 3, 7; *gerises*  
Mk. 13, 10. L. I 3, 8. I 4, 5. I 6, 14;

## Class II

*bebeadan* ‘announce’

1st sg.pres.ind.

-e

*bebeade* Mk. 9.25

-o

*bebido* L. 23.46, *bebeado* J. 15.14,

*bebeodo* J. 15.17

3<sup>rd</sup> sg.pres.ind. *bebeadas* J. I 7.19

*brucan* ‘use’

1st sg.pres.ind. *brucco* L. 22.11, 22.16

3<sup>rd</sup> sg.pres.ind. *brucað* L. 14.15, J.

13.18, *bruccað* J. 6.56, 6.58, *bruceð* J.

6.57

*gebruca* ‘use’

3<sup>rd</sup> sg.pres.ind. *gebruced* J. 6.50,

*gebruccað* J. 6.54, *gebrucces* J. 6.51

## Class III

*tógægne liorna* ‘run’

3<sup>rd</sup> sg.pres.ind. *togægnesiorneð* L.

22.10; *togægniornað* Mk. 14, 13

*āworpan* ‘cast out’

1st sg.pres.ind. *aworpo* L. 6.42, 11.19,

11.20, 13.32

3<sup>rd</sup> sg.pres.ind. *aworped* L. 11.15

*forgeldan* ‘pay for’

1st sg.pres.ind.

-o

*f'geldo* Mt. 18.29, L. 10.35, 19.8

- ø

*forbeadan* ‘forbid’ (beodan 2)

3<sup>rd</sup> sg.pres.ind. *f'beades* Mk. I. 4.9

*forebeada*

3<sup>rd</sup> sg.pres.ind. *forebeadas* Mt. I. 17.3

*cēasa* ‘choose’ II

1st sg.pres.ind. *ceasa* Mt I. 4.11

*gelūta* ‘bend’

3<sup>rd</sup> sg.pres.ind. *gehlutes* Mt 8, 20

*tóworpa* ‘to throw’

3<sup>rd</sup> sg.pres.ind. *towærpað* Mt. 27,40

*worpa* sv.

1st sg.pres.ind. *uorpo* J. 6, 37

2<sup>nd</sup> sg.pres.ind. *worpes* Mt. 8, 31

3<sup>rd</sup> sg.pres.ind. *worpað* Mk. 4,26

*f'geldig* Mt. 18.26

2<sup>nd</sup> sg.pres.ind. *forgeldes* Mt. 5.33

3<sup>rd</sup> sg.pres.ind. *forgeldeð* Mt. 6.4,

*f'geldeð* Mt. 6.18, *f'geldes* Mt. 6.6,  
16.27

*befregna* ‘ask’

2<sup>nd</sup> sg.pres.ind. *befregnes* Mt. 19.17

*blinnan* ‘cease’

3<sup>rd</sup> sg.pres.ind. *blinnes* Mt. 24.12

*delfan* ‘dig’

1st sg.pres.ind. *delfo* L. 13.8

3<sup>rd</sup> sg.pres.ind. *delfæð* L. 6.48

*forworða* ‘perish’  
 3<sup>rd</sup> sg.pres.ind. *fʷwordes* Mt. 5.13

*gebinda* ‘bind’  
 3<sup>rd</sup> sg.pres.ind. *gebindeð* L. 11.22

*gecearfa* ‘cut’  
 3<sup>rd</sup> sg.pres.ind. *gecearfas* Mt. 7.19

*gefinda* ‘find’  
 3<sup>rd</sup> sg.pres.ind. *gefindes* L. 15.9

*gegrindan* ‘grate’  
 3<sup>rd</sup> sg.pres.ind. *gegrindæs* L. 20.18  
*onbinda* sv. III ‘bind’  
 2<sup>nd</sup> sg.pres.ind. *onbindes* Mt. 16, 19  
*gesinga* ‘to sing’  
 3<sup>rd</sup> sg.pres.ind. *gesingað* J. 13, 38

*worða* ‘to be made’  
 3<sup>rd</sup> sg.pres.ind. *wordes* L. 1, 34, 23, 31

*geworða*  
 3<sup>rd</sup> sg.pres.ind. *geworðas* Mt. 18, 13;  
*geuorðes* J. 10,16

*inginna*  
 2<sup>nd</sup> sg.pres.ind. *inginnas* L. 14, 9

*singa* ‘sing’  
 3<sup>rd</sup> sg.pres.ind. *singeð* L. I 4, 1; *singes* L. 22.34

*swinga*  
 2<sup>nd</sup> sg.pres.ind. *suingas* Mt. 23, 34

*onginna*  
 3<sup>rd</sup> sg.pres.ind. *onginneð* Mt. I 1, 1. I 16, 1. heading ch. 1. Mk. heading ch. 1. L. I 11, 18. heading ch. 1. 12, 45. J. heading ch. 1; *onginnes* Mt. I 9, 11. I 14,

1; *ongīnes* Mt. I 8, 11; *onginnes* Mt. I 3, 18

*gelimpa* ‘happen’  
 3<sup>rd</sup> sg.pres.ind. *gelimpeð* L. 21, 13

*unbinda* ‘untied’  
 2<sup>nd</sup> sg.pres.ind. *unbindes* Mt. 16, 19  
 3<sup>rd</sup> sg.pres.ind. *unbindeð* L. 13, 15

*infinda* ‘to find’  
 2<sup>nd</sup> sg.pres.ind. *infindes* Mt. I 4, 8  
 3<sup>rd</sup> sg.pres.ind. *infindes* Mt. 7,8. 10, 39. 16,25; *ifindas* Mt. I 9,13

*onfinda*  
 2<sup>nd</sup> sg.pres.ind. *onfindes* Mt. I 4, 11. 1 10,1. I 10,4. 17,27  
 3<sup>rd</sup> sg.pres.ind. *onfindes* Mt. 10,39. 13,44

*fregna* ‘to inquire’  
 1st sg.pres.ind. *fregno* Mt. 21.24,  
*fregna* Mk. 11.29, *frægno* L. 22.68

*scrinca* sv. ‘to shrivel’ III  
 3<sup>rd</sup> sg.pres.ind. *scrinceð* Mk. 9, 18.

*underdelfa* sv. ‘dig’  
 3<sup>rd</sup> sg.pres.ind. *underdelfes* Ml 13, 22

*tóstregda* ‘to disperse’  
 3<sup>rd</sup> sg.pres.ind. *tostraigdes* J. 10, 12;  
*tostraegdæð* L. 11, 23

*stregda*  
 3<sup>rd</sup> sg.pres.ind. *streigdæs* Mt. 12, 30

*geberna* ‘burn’  
 3<sup>rd</sup> sg.pres.ind. *gebernað* L. 11.33,  
*geberneð* L. 3.17, *gebernes* L. 8.16

*forbernan* ‘burn’  
3<sup>rd</sup> sg.pres.ind. *f’bernes* Mt. 3.12

*bernan* ‘burn’  
3<sup>rd</sup> sg.pres.ind. *berneð* L. 15.8

## Class VII

*ondreda* ‘dread’  
1st sg.pres.ind. *ondredo* L. 18, 4  
2<sup>nd</sup> sg.pres.ind. *ondredes* L. 23,40  
3<sup>rd</sup> sg.pres.ind. *ondredeð* J. 14, 27

*forlētan* ‘abandon’

1st sg.pres.ind.

-o

*forleto* Mt. I. 2.11, *f’leto* Mk. 8.3, 15.9,  
*f’lēto* Mk. 23.22, *f’letto* J. 14.27

-e

*f’lette* L. 5.5

-ø

*flet* J. 14.18

2<sup>nd</sup> sg.pres.ind. *f’letas* J. 19.12  
3<sup>rd</sup> sg.pres.ind. *forletas* Mk. 10.11,  
*f’letas* Mt. 5.31, 19.9, 19.29, Mk. 10.12,  
L. 16.18, *f’letes* Mt. 5.32, 18.12, 21.3,  
Mk. 11.3, 12.19, L. 18.29, J. 10.4,  
*f’lettes* Mt. 19.5, *f’lettas* J. 10.12,  
*forleites* Mt. I. 17.3, *f’letað* Mk. 10.29,  
*f’leteð* Mk. 10.7, L. 15.4, J. 8.29

*behāldan*

3<sup>rd</sup> sg.pres.ind. *behaldas* Lk. 9.62

*eftforletan* ‘release’

1st sg.pres.ind. *eftfl’eto* J. 16.28

*fallan* ‘fall’

*wiðsæcga* (strong in Cook, weak Class 3  
originally) ‘to renounce’

2<sup>nd</sup> sg.pres.ind. *wiðsæcces* Mt. 26, 34

2<sup>nd</sup> sg.pres.ind. *fallas* Mt. 4.9  
3<sup>rd</sup> sg.pres.ind. *falleð* L. 11.17, 14.5,  
*fallæð* Mt. 10.29, *fallas* Mt. 17.15,  
21.44, *fælles* L. 8.10, *faelles* Mt. 21.44

*gefālla*

3<sup>rd</sup> sg.pres.ind. *gefalleð* L. 20.18,  
*gefallas* Mt. 12.11

*gehalda* ‘hold’

3<sup>rd</sup> sg.pres.ind. *gehaldað* L. 11.21, J.  
8.51, *gehaldeð* J. 8.52, *gehaldæs* Mt. I.  
9.3, *gehaldað* J. 12.23, 12.47, 14.21,  
14.23, 14.24, *gehaldes* J. I. 5.17

*gehatan* ‘command’

3<sup>rd</sup> sg.pres.ind. *gehateð* L. 4.36, *gehates*  
Mk. I. 15.16, I. 22.11

*hāta* ‘command’

2nd sg.pres.ind. *hates* Mt. I 1, 11;  
3 sg. *hatteð* L. 8, 25; *hateð* L. I 7, 17;  
*hates* Mt. I 16, 9. I 17, 1; *hātas* Mk.  
1,27; *hata* Mt. 26,36; ***hæt* (pret. 3 sg.?)**  
**Mk. I 3, 20**

*wæxa* ‘grow’ (originally Class VI)

3<sup>rd</sup> sg.pres.ind. *wæxað* Mk. 4, 27; *wæxes*  
Mk. 1, 6

*onwæxa*

3<sup>rd</sup> sg.pres.ind. *onwæxes* Mt. I 4, 2



inwæxa sv. ‘grow’ originally Class VI, now VII (Wright & Wright 1925: §516)  
3<sup>rd</sup> sg.pres.ind. *inwæxað* Mk. 4, 27

*tóscēada* ‘to separate’  
1st sg.pres.ind. *tosceade* Mt. I 2, 4;  
*tosceado* L. 22, 29  
3<sup>rd</sup> sg.pres.ind. *tosceadeð* Mt. I 7, 16;  
*tosceadas* Mt. 13,49. 25,32; *tosceades*  
Mt. 25,32. L. I 2, 8

*ofscēada*  
3<sup>rd</sup> sg.pres.ind. *ofsceades* Mt. I 14, 6

gesceada ‘separate’  
3<sup>rd</sup> sg.pres.ind. *gesceadeð* L. I 8, 15;

*oncnāwa* ‘to know’  
2<sup>nd</sup> sg.pres.ind. *oncnauas* Mk. 8, 33  
3<sup>rd</sup> sg.pres.ind. *oncnauað* Mk. 13, 14;  
*oncnaweð* Mt. 24, 15; *oncnawes* Mt. I  
9, 14

*tóstonda* ‘to stand apart, distance’

(Class VI, short, but present has *-nd-* on analogy with Class VII, and hence is heavy).

1st sg.pres.ind. *tostondo* L. 1, 19

*ymbstonda*  
3<sup>rd</sup> sg.pres.ind. *ymbstondas* J. 11,42

*stonda*  
3<sup>rd</sup> sg.pres.ind. *stondeð* L. 11, 81;  
*stondas* 12 Mt. 12.25, 12,26. J.3.29;  
*stondes* Mt. 18,16. 22,40

*hālda* ‘to hold’  
1st sg.pres.ind. *haldo* J. 8, 55  
2<sup>nd</sup> sg.pres.ind. *haldes* Mt. I 9, 18  
3<sup>rd</sup> sg.pres.ind. *haldas* Mt. 12,11. J 9.16

*lēta* ‘to let go’  
1st sg.pres.ind. *leto* L. 13, 18. 23, 44  
3<sup>rd</sup> sg.pres.ind. *lettes* J. 16, 2; *letes* Mk.  
12, 19

Heavy strong forms	apocopated	total	% apocopated
1st sg.pres.ind.	2	56	

Heavy strong forms	syncopated	total	% syncopated
2 <sup>nd</sup> /3 <sup>rd</sup> sg.pres.ind.	<b>1?<sup>57</sup> hætt (pret. 3 sg.?) Mk. I 3, 20;</b>	239 (72 with – a-)	

<sup>57</sup> This form may be preterite, as noted in Cook (1894).

## (A2.2) Weak verbs (Class 1)

### A1(2.1.1) Light stems

*getrymma* ‘strengthen’ fremman type

1st sg.pres.ind. *getrymmo* J. 8, 14;

*getrymo* J. 8,18

3<sup>rd</sup> sg.pres.ind. *getrymmeð* Mt. I 5, 1. I

16, 6. J. 21, 24; *getrymmes* J. 1, 15;

*getrymmas* Mt. I 17, 5; *getrymeð* J.I 4,

3. I 7,9. 3,32. 5,32(2); *getrymað* L. I 10,

10; *getrymes* Mt. I 17,15. J.8,13. 8,18.

15,26; *getriað* J. I 7, 17

*trymma*

1st sg.pres.ind. *trymmo* J. 5, 31

*ðerhtrymma*

1st sg.pres.ind. *ðerhtrymmo* J. 18, 37;

*ðerhtryme* J. 7, 7

*ymbstyryga* ‘stir’

3<sup>rd</sup> sg.pres.ind. *ymbstyreð* L. 15, 8

*styriga* ‘excite’ (*nerian* type)

2<sup>nd</sup> sg.pres.ind. *styres* Mk. 5, 35

*sceðða*<sup>58</sup>

3<sup>rd</sup> sg.pres.ind. *sceððað* Mk. 16, 18

*gesceðða* ‘to oppress’

3<sup>rd</sup> sg.pres.ind. *gesceðeð* L. 10, 19

*byrigan* ‘bury’ Class 1

---

<sup>58</sup> *sweððan* and *sceððan* are classed as *fremman* types in Wright & Wright (1925), but in pret. they seem to behave like *settan* (due to dental?).

(sonorant+sonorant cluster)

3<sup>rd</sup> sg.pres.ind. *byreð* Mk. 4.38, J.

10.13, *byres* L. I. 1.1

*gebyryga* ‘bury’

3<sup>rd</sup> sg.pres.ind. *gebyreð* J. 2.4 (mg),

12.6, *gebyres* Mt. I. 8.16

*sella*<sup>59</sup> ‘give’

1<sup>st</sup> sg.pres.ind. *sello* (11 times); *selo* Mt.

20, 4. J. 4, 14. 6,

51. 13,34. 14,27( 2 ); *silo* J. 10, 28

2<sup>nd</sup> sg.pres.ind. *selles* L. 22, 48

3<sup>rd</sup> sg.pres.ind. *sellað* Mt. 24, 29. L. 11.

13; *selleð* Mk.13,12. 14,42. L.11,11;

*seleð* (19 times); *sileð* L. I 6, 14; *silið* J.

17, 2. 21, 13; *sellas* Mt. 26, 48; *selles*

Mt. 10, 42. L. 11,8. J. 21, 20; *seles* Mt.

7, 9. 16, 26. L. I 4, 8

*gesella*

3<sup>rd</sup> sg.pres.ind. *geselleð* Mt. 7, 11.

J.13,21; *geseleð* Mt. 10,21. Mk. 9, 41.

J. 16, 23; *gesileð* J. 1 1, 4; *gesilið* J.

11.22. 14,16; *geseallas* Mt. 24, 10;

*gesellas* Mt. 10, 17; *gesellaes* Mt. 5, 25;

*geseles* J. 3, 34

*getella* ‘tell’ (formed pret. without

medial vowel already in prim. gmc.

(Wright & Wright 1925: 534))

---

<sup>59</sup> The *ll* is formed pret on analogy with type a. Forms like *sellan*, *tellan* pattern like *fremman* in the present system (Campbell 1959: §753.9).

3<sup>rd</sup> sg.pres.ind. *getelles* L. 14, 28

Light Class 1 weak excl. dental forms	apocopated	total
1st sg.pres.ind.	0	23

	syncopated	total
2 <sup>nd</sup> /3 <sup>rd</sup> sg.pres.ind.	0	74

#### (A2.2.1) Light forms with a root-final *t/d*:

*āsettan* ‘set, put’

3<sup>rd</sup> sg.pres.ind. *asette* Mt. 27.48

*efisettan*

2<sup>nd</sup> sg.pres.ind. *efisettes* Mt. I. 3.13

*gesetta*

3<sup>rd</sup> sg.pres.ind. *gesettes* Mt 24,47. L.  
12,42. 12,44; *gesetes* Mt I 14, 13

*onsetta*

3<sup>rd</sup> sg.pres.ind. *onsettað* L. 15, 5

*setta*

1st sg.pres.ind. *setto* (10 times)

2<sup>nd</sup> sg.pres.ind. *settis* J. 13,38

3<sup>rd</sup> sg.pres.ind. *setteð* (8 times); *seteð* L.  
18,12; *settes* Mt. 24, 51

*tógesetta*

3<sup>rd</sup> sg.pres.ind. *togesettes* Mt. I 22, 3

*ondeta* ‘praise’

1st sg.pres.ind. *ondeto* Mt. 7, 23. 11,25.

L. 10,21; *ondet<sup>u</sup>* Mt. 10, 32

3<sup>rd</sup> sg.pres.ind. *ondetað* Mt. I 6, 12. Mk.  
I 4, 1; *ondeteð* Mk. 8,38

light Class 1 weak dental forms	apocopated	total
1st sg.pres.ind.	0	14

	syncopated	total
2 <sup>nd</sup> /3 <sup>rd</sup> sg.pres.ind.	1 <i>asette</i> (final v)	22

## (A2.2.2) Heavy forms in Class 1

### (a) Obstruent+sonorant cluster forms

*hyngra* ‘to hunger’

3<sup>rd</sup> sg.pres.ind. *hyncgreð* J. 6, 35

*getimbra* ‘to build’

1st sg.pres.ind. *getimbro* Mt. 16, 18.  
Mk. 14, 58

3<sup>rd</sup> sg.pres.ind. *getimbras* Mk. 15, 29;  
*getimbres* Mt. I 17, 19. 7, 24

*ræfna* ‘endure’ (like *hyngran*)

3<sup>rd</sup> sg.pres.ind. *hræfneð* Mt. 6, 24

*gefregna* strong/weak (son son) ‘to inquire’

1st sg.pres.ind. *gefregno* L. 23.14,  
*gefraegno* L. 16.9

2<sup>nd</sup> sg.pres.ind. *gefraignes* J. 18.21

3<sup>rd</sup> sg.pres.ind. *gefraignas* L. 19.31,  
*gefregne* J. 16.5

*efnigan* ‘level’ (Originally Class 1

according to Wright& Wright 1925:  
§532)

2<sup>nd</sup> sg.pres.ind. *efnes* Mt. 20.12

*degla* ‘to hide’ Class 1/2 in B&T

3<sup>rd</sup> sg.pres.ind. *degelde* Mt. 13.33 part.?

*gedæfna* ‘to be becoming, seemly’  
(*dafenian*)

3<sup>rd</sup> sg.pres.ind. *gedæfneð* L. 4.43, 13.33,  
J. I. 6.10, *gedæfnað* J. 3.30, 9.4, 10.16,  
12.34, *gedaefnað* J. 19.7, *gedaefneð* J.  
3.7

*becniga* ‘make signs’

3<sup>rd</sup> sg.pres.ind. *becneð* L. 13.11

*drysna* ‘to drench’

3<sup>rd</sup> sg.pres.ind. *drysnes* Mt. 12.20

Heavy Class 1 weak obs+son forms	apocopated	total
1st sg.pres.ind.	0 (0 stem epenthesis)	4

	syncopated	total
2 <sup>nd</sup> /3 <sup>rd</sup> sg.pres.ind.	<b>0 epenthesis</b> <b>0 syncope</b>	21

(b) Heavy forms with t/d

*hyhta* ‘to hope’ (*deman* type but with Class 2 endings)

3<sup>rd</sup> sg.pres.ind. *hyhtas* Mt. 24,50; *hylitað* L. 12, 46

*senda* ‘to send’

1st sg.pres.ind. *sendo* (14 times)

3<sup>rd</sup> sg.pres.ind. *sendeð* (7 times); *sendað* L. 12, 58; *sendes* (5 times)

*foresendan*

3<sup>rd</sup> sg.pres.ind. *fʳesendeð* J I. 6.16

*insenda*

3<sup>rd</sup> sg.pres.ind. *insendes* Mt. 9, 10

*onsenda*

3<sup>rd</sup> sg.pres.ind. *onsendeð* L. 5, 36

*ðyrsta* ‘thirst’ (*send* type)

1st sg.pres.ind. *ðyrsto* J. 4, 15, 19, 28

3<sup>rd</sup> sg.pres.ind. *ðyrsteð* J. 4, 14, 7, 37; *ðyrstes* J. I 5, 6, 6, 35

*ondwearda* ‘answer’ (*send* type)

2<sup>nd</sup> sg.pres.ind. *ondueardest* (*ðu*) Mk. 14, 60, 15, 4

3<sup>rd</sup> sg.pres.ind. *ondweardað* Mt I 1, 12; *ondueardeð* Mt. 25, 45

*inlihta* (*send* type)

3<sup>rd</sup> sg.pres.ind. *inlihteð* J. 1, 9, 5, 21;

*inlehtað* L. 11, 36; *inlihtas* Mt. I 18, 11

*lihta*

3<sup>rd</sup> sg.pres.ind. *lihteð* Mt. 5, 15; *lehteð* Mt. 5, 16

*āspeafta* ‘spit out’

3<sup>rd</sup> sg.pres.ind. *aspeaft* J. 9.6. No ending  
- reduction after syncope?

*fæstan* ‘to fast’ Class 1 heavy

1st sg.pres.ind. *fæsto* L. 18.12

2<sup>nd</sup> sg.pres.ind. *fæstas* Mt. 6.17

*læda* ‘to lead’

3<sup>rd</sup> sg.pres.ind. *lædað* L. 9, 23. J. 10, 3:

*lædeð* L. 16, 18. J. 1, 29; *lædas* Mt. 7,13;

*lædes* Mt. 7, 14, 19,9. L. 13, 15, 16, 18.

J. 21, 18; *lædges* Mt. 5, 32

*inlæda*

3<sup>rd</sup> sg.pres.ind. *inlædeð* L. 1 6, 19. J. I 7, 16

*forelædan* ‘to bring’ (*deman* type)

3<sup>rd</sup> sg.pres.ind. *fʳelædas* Mt. 15.14

*gebōeta* ‘threaten’

3<sup>rd</sup> sg.pres.ind. *gebeotes* Mt. I. 14.13

*āwæltan* ‘roll’

3<sup>rd</sup> sg.pres.ind. *awæltas* Mk. 16.3

*eftgeboetan*

3<sup>rd</sup> sg.pres.ind. *eftgeboetað* Mk. 9.12

*bōetan* ‘mend’

2<sup>nd</sup> sg.pres.ind. *boetas* Mt. I. 3.13,

*boetes* Mt. I. 2.3

*gescenda* ‘to shame’ (*send* type)

2<sup>nd</sup> sg.pres.ind. *gescendes* L. 12,33

*fōedan* ‘feed’  
3<sup>rd</sup> sg.pres.ind. *foedeð* L. 12.24, *foedas*  
Mt. 6.26

*gegyrda* ‘bind’ (*send* type)  
3<sup>rd</sup> sg.pres.ind. *gegyrdeð* L. 12.37,  
*gyrdeð* J. 21, 18.

*geræsta* ‘to rest’ (*deman* type)  
3<sup>rd</sup> sg.pres.ind. *ge(h)restað* L. 22, 27

*gewōenda* ‘turn’ (*send* type)  
3<sup>rd</sup> sg.pres.ind. *gewoendas* Mt. 10, 13

*rēda* ‘to counsel’  
2<sup>nd</sup> sg.pres.ind. *redes* Mt. I 3, 11  
3<sup>rd</sup> sg.pres.ind. *redas* Mt. I 3, 8; *redes*

Mk. I 1, 11; *redes* Mk. 13, 14

*locceta* ‘sigh’  
1st sg.pres.ind. *loccete* Mt. 13, 35  
3<sup>rd</sup> sg.pres.ind. *loceteð* Mt. I 7, 5

*āwædan* ‘rage’  
3<sup>rd</sup> sg.pres.ind. *auoedeð* J. 10.20

*liffæsta* ‘to give life’  
3<sup>rd</sup> sg.pres.ind. *liffæstas* J. 6, 63

*gewoeda* ‘to rage’  
3<sup>rd</sup> sg.pres.ind. *geuedes*\* Mt. 6, 30  
(\**geuoedes* changed to *geuedes* in MS.)

*nēda* ‘to force’  
2<sup>nd</sup> sg.pres.ind. *neddes* Mt. I 1, 1

Heavy Class 1 weak dental forms	apocopated	total
1st sg.pres.ind.	0	18

	syncopated	total
2 <sup>nd</sup> /3 <sup>rd</sup> sg.pres.ind.	1 <i>aspeaft</i> (x17 were –a-)	69

### (C) Highly sonorous heavy forms (excl. obs+son)

*ondswariga*<sup>60</sup> ‘to answer’

---

<sup>60</sup> This form is a Class 1 *nerian* type, with some Class 2 endings. Two are syncopated in weak pret. Note though the stressed prefix.

2<sup>nd</sup> sg.pres.ind. *ondsuaeræstu* J. 18,22

*gestæna* ‘to stone’  
3<sup>rd</sup> sg.pres.ind. *gestænað* L. 20, 6

---

*stæena*

2<sup>nd</sup> sg.pres.ind. *stænað* L. 13, 34; *stænas* Mt. I 21, 18. 23, 37

*gehrīna* ‘touch’

3<sup>rd</sup> sg.pres.ind. *gehrineð* L. 7, 39

*getēla* ‘accuse’

3<sup>rd</sup> sg.pres.ind. *geteleð* Mt. 6, 24. 12, 42. L. 18, 5

*tȳna* ‘enclose’

3<sup>rd</sup> sg.pres.ind. *tyneð* L. 13,25

*ontȳna*

1st sg.pres.ind. *ontyno* Mt. 13,35

3<sup>rd</sup> sg.pres.ind. *ontyneð* J. 10, 3

*untȳna* ‘to hide’

3<sup>rd</sup> sg.pres.ind. *untynes* Mt. 5,19

*tóuntȳna*

3<sup>rd</sup> sg.pres.ind. *tountynes* L. 2, 23

*getrēwa* ‘to trust’ (treowan) (In B&T *trewan* is noted as having uncertain status)

3<sup>rd</sup> sg.pres.ind. *getreweð* Mt 27, 43

*gehēna* ‘humble’

3<sup>rd</sup> sg.pres.ind. *geheneð* L. 10.16 (x2), 11.31, *gehænas* J. 8.10

*hēna* ‘rebuke’

3<sup>rd</sup> sg.pres.ind. *henes* L. 10, 16 (x2)

*læra* ‘teach’

2<sup>nd</sup> sg.pres.ind. *læres* Mt. 22, 16. Mk. 12, 14. L. 20, 21 (x2). J. 9, 34

3<sup>rd</sup> sg.pres.ind. *lærað* Mt. I 17, 12;

*læreð* Mt. I 20, 5. 5, 19. Mk. I 3, 10.14,8. 14,10. 15,4. 15,8. L. 16,6.

16,11. 17,9. 19,7. 19, 14. I 11,14. J.I 7, 12; *læreð* Mt.

5, 19; *læras* Mt I 17, 10; *laeras* Mt. I

17, 6; *laeres* Mt. I 17, 4. I 17,8. I 17, 16;

*læres* J. I 2, 6

*gehēra* ‘to hear’

1st sg.pres.ind. *hero* L. 15,29. 16, 2,

*gehero* L. 9.9

2<sup>nd</sup> sg.pres.ind. unsyncopated *geheres* J.

3.8, 11.42, *heres* Mt. 27,13 (x2),

**syncopated . *gehers* Mt. 21.16**

3<sup>rd</sup> sg.pres.ind. *heres* Mt. 13, 19. 13,22.

13,23. 18,17 (x2); *hēres* Mt. 10,14;

*geheres* Mt. 7.24, 7.26, 12.19, 18.15,

18.16, J. 3.29, 5.24, 9.31, 12.26, 12.47,

16.13, *geheras* Mt. 11.15, *geherað* Mt.

13.9, Mk. 4.9, 4.23, L. 8.8, J. 9.31,

*gehereð* Mk. 6.11, L. 6.47, 10.16, 14.35,

J. 3.32, *geh’ed* L. 10.16

*ācennan* ‘bring forth’

2<sup>nd</sup> sg.pres.ind. *accennes* L 1.31

3<sup>rd</sup> sg.pres.ind. *acennes* J 16.21

*ācwællan* ‘kill’

3<sup>rd</sup> sg.pres.ind. *accuellæs* J 16.2

*dælan* ‘to divide’

3<sup>rd</sup> sg.pres.ind. *dæles* Mt. 24.51

*tóðæla*

3<sup>rd</sup> sg.pres.ind. *toðæleð* L. 12, 46

*doema* ‘judge’

1st sg.pres.ind. *doemo* J. 5.30, 8.15,

21.25, *doeomo* L. 19.22, *doema* L.

13.18, J. 12.47

3<sup>rd</sup> sg.pres.ind. *doemeð* Mt. I. 7.16, J.

16.2, *doemað* J. 5.22, 7.51, 8.50,  
*ðoemað* J. 7.51, *doemes* J. 12.48

*gedoema* (*dēman*)

1st sg.pres.ind. *gedoemo* J. 8.16  
3<sup>rd</sup> sg.pres.ind. *gedoemeð* J. 12.48

*fāman* ‘to froth’

3<sup>rd</sup> sg.pres.ind. *fāmeð* Mk. 9.18

*āðennan* ‘extend’

2<sup>nd</sup> sg.pres.ind. *aðenes* J. 21.18

*gecerra* (*cierran*) ‘turn’

3<sup>rd</sup> sg.pres.ind. *gecerreð* L. 1.16, 23.5,  
*gecerres* L. 12.36

*cerran*

1st sg.pres.ind. *cearro* Mt. 12.44

*eftcerran*

1st sg.pres.ind. *eftcerro* L. 10.35, 11.24

*eftgecerran*

3<sup>rd</sup> sg.pres.ind. *eftgecerreð* L. 10.6,  
*eftgecerres* Mk. 13.16, *eftgecerras* Mt.  
24.18

*woēna* ‘suppose’ (-*de* in pret. in B&T)

1<sup>st</sup> sg.pres.ind. *woeno* Mt. L. (8 times)  
2<sup>nd</sup> sg.pres.ind. *woenes* Mt. 24, 45. Mk.  
4, 41. L. 1,66, 12,42; *woenest* L. 8. 25;  
*woenis* L. 18, 8; *woenæs* Mt 26, 53;  
*wenes* Mt. 18, 1  
3<sup>rd</sup> sg.pres.ind. *woenas* Mt. 24, 50;  
*uoenas* J. 16, 2; *woenað* L. 12,46;  
*woeneð* L. 8, 18

*gegēma* ‘heal’

3<sup>rd</sup> sg.pres.ind. *gegemes* Mt. I. 14.6

*gecenna* ‘conceive’

3<sup>rd</sup> sg.pres.ind. *gecennes* Mt. 1.21, 1.23

*efnefroēfra* ‘soothe’

3<sup>rd</sup> sg.pres.ind. *efnefroefres* Mt. I. 1.10

*gefroefra*

1st sg.pres.ind. *gefroefre* Mt. 11.28

*nemna* ‘to name’ (*deman* type)

3<sup>rd</sup> sg.pres.ind. *nemneð* L. I 5, 6. I 8, 8

*gehāla* ‘to heal’

3<sup>rd</sup> sg.pres.ind. *gehæl*’ L. I. 5.1

*hæla*

1st sg.pres.ind. *haelo* Mt. 13, 15. J. 12,  
40  
3<sup>rd</sup> sg.pres.ind. *hæleð* Mt. I 18, 2. I 18,7.  
I 18, 10; *hæled* Mt. I 20, 7. L. I 6, 1. J. I  
4, 9; *hæles* Mt. I 19, 1. I 19,2. I 21,3;  
*haeles* I 19, 3

*gespilla* ‘destroy’

3<sup>rd</sup> sg.pres.ind. *gespilleð* L. 17,33;  
*gespilles* Mt. 6,20

*spilla*

3<sup>rd</sup> sg.pres.ind. *spilleð* L. 17, 33. 20, 16;  
*spildeð* J. 10, 10. 12, 25

*oferlīora* ‘to pass over’

3<sup>rd</sup> sg.pres.ind. *oflīoræs* J. 5, 24

*līora*

3<sup>rd</sup> sg.pres.ind. *līorað* Mt. 26, 39; *līores*  
Mt. 5, 18

*forelīoran* ‘to depart’ (Class 1 in bt (no  
length in bt, but length in cook?))

1st sg.pres.ind. *f'līora* Mt. 26.32



3<sup>rd</sup> sg.pres.ind. *f'eliorað* Mt. 28.7

3<sup>rd</sup> sg.pres.ind. *benimeð*

*geflylla* 'to fill'

3<sup>rd</sup> sg.pres.ind. *gefylleð* J. 16.6, *gefylles* Mt. I. 21.6

*tēla* 'accuse'

3<sup>rd</sup> sg.pres.ind. *telað* Mk. I 3, 14. 15,3;  
*teleð* J L. 10, 16; *teles* J. 12, 48

*benīoma* 'to name'

Heavy Class 1 weak sonorant forms	apocopated	total
1st sg.pres.ind.	0	34

	syncopated	total
2 <sup>nd</sup> /3 <sup>rd</sup> sg.pres.ind.	1	149 (-a x26, - æ- x2)

### (C) 'standard' heavy forms

*wōepa* 'to lament/weep'

2<sup>nd</sup> sg.pres.ind. *uoepæs* J. 20, 13;  
*uoepestu* J. 20, 15

*woērga* 'curse'

3<sup>rd</sup> sg.pres.ind. *werges* Mt. 15, 4  
(altered from *woerges* to *werges*)

*wræða* 'to get angry'

3<sup>rd</sup> sg.pres.ind. *uraeðes* Mt. 5, 22

*stencā* 'to pant'

3<sup>rd</sup> sg.pres.ind. *stenceð* J. 11, 39

*gebēga* 'traverse'

3<sup>rd</sup> sg.pres.ind. *gebegað* L. 14.11,  
*gebegeð* L. 18.14, *gebeges* Mt. 8.20,  
23.12

*gelēfan* 'allow'

1st sg.pres.ind.

-o

*gelefo* Mk. 9.24, J. 9.38

- ø

***gelef* J. 20.25**

2<sup>nd</sup> sg.pres.ind. *gelefeð* J. 1.50, *gelefes* J.  
9.35, 11.26, 11.40

3<sup>rd</sup> sg.pres.ind. *gelefað* J. 7.38, *gelefeð*  
Mk. 16.16, L. 16.11, J (x9), *gelefes* Mk.  
9.23, 16.16, J. (x8)

*cēigan* 'to call'

3<sup>rd</sup> sg.pres.ind. *ceigað* Mk. I. 3.3, *ceigeð*  
Mt. I. 16.10, L. I. 5.7, 20.44, J. I. 4.12,  
I. 6.12, 2.9, 10.3, *ceigas* Mt. I. 6.17, I.  
18.7, 22.43, 22.45, 27.47, Mk. 10.49,

*ceiges* Mk. 15.35, J. 11.28

*efnegeceiga*

3<sup>rd</sup> sg.pres.ind. *efnegeceigað* L. 15.9

*geceiga*

3<sup>rd</sup> sg.pres.ind. *geceigeð* L. 14.9, 15.6,  
*geceiges* J. I. 5.3

*læfa* ‘leave’

3<sup>rd</sup> sg.pres.ind. *læfes* Mk. 12,19

*oferlæfa*

3<sup>rd</sup> sg.pres.ind. *oflæafeð* L. 11,41

*læða* ‘accuse’

3<sup>rd</sup> sg.pres.ind. *læð(u)es* L. 14,26

*gebrengra* ‘bring’

2<sup>nd</sup> sg.pres.ind. *gebrenge*s Mt. 5.23

3<sup>rd</sup> sg.pres.ind. *gebrengað* J. 10.3,  
*gebrenge*s Mt. 13.23

*tóbrengra*

3<sup>rd</sup> sg.pres.ind. *tobrenge*s J. 12, 24

*brengran*

1st sg.pres.ind. *brenge* J. 19.4

3<sup>rd</sup> sg.pres.ind. *brengeð* J. 15.2, *brenge*s  
Mt. 19.9 (x2), J. 15.5

*gebirga* ‘taste, eat’

3<sup>rd</sup> sg.pres.ind. *gebirgað* L. 14.24,  
*gebirgeð* J. 8.52

*bēga* ‘humble’ (1)

3<sup>rd</sup> sg.pres.ind. *beges* Mt. 18.4

*cýðan* ‘know’

3<sup>rd</sup> sg.pres.ind. *cyðað* Mk. I. 5.5

*forcyðan* ‘surpass’

3<sup>rd</sup> sg.pres.ind. *fcyðas* Mt. I. 21.16, I.  
21.7

*æfterfylgan* (folgian) ‘pursue/follow  
after’

3<sup>rd</sup> sg.pres.ind. *æftfylges* Mt. I. 8. 16

*gefylga*

3<sup>rd</sup> sg.pres.ind. *gefylgeð* Mt. 16.24

*fylga*

1st sg.pres.ind. *fylgo* Mt. I.18.3, 8.19, L.  
I.6.12, 9.57, 9.61

3<sup>rd</sup> sg.pres.ind. *fylgeð* L. 9.23, J. 8.12,  
*fylges* Mt. 10.38, Mk. 9.38, L. 9.42

*ræca* ‘reach’

1st sg.pres.ind. *ræco* J. 13, 26

2<sup>nd</sup> sg.pres.ind. *reces* Mk. 4, 38

3<sup>rd</sup> sg.pres.ind. *ræceð* L. 11, 12; *ræceð*  
Mt. 7, 9; *ræces* Mt. 7, 10

*nēolēca* ‘move near’

3<sup>rd</sup> sg.pres.ind. *neoleces* Mt. 26, 46

*tógenēolēca*

3<sup>rd</sup> sg.pres.ind. *togeneolecað* L. I 10, 18

*slēpa* ‘to sleep’

2<sup>nd</sup> sg.pres.ind. *slepes* Mk. 14, 37

3<sup>rd</sup> sg.pres.ind. *slepað* J. 11, 12; *slepeð*  
Mk. 4, 27. 5, 39. L. 8, 52. J. 11, 11;  
*slepiast* Mk. 4, 27; *slepes* Mt. 9, 24

*dēpan* ‘baptize’

3<sup>rd</sup> sg.pres.ind. *ðepeð* Mt. 26.23

*gerýpa* ‘spoil’

3<sup>rd</sup> sg.pres.ind. *gehrypes* Mt. 12, 29

*geyppa* ‘to open’

1st sg.pres.ind. *geyppe* Mt. 13,35

*\*The following forms have preterites without –i in Prim. Gmc. (including /ll/ forms which form their geminate on analogy with type 1(a) according to Wright & Wright (1925), but this is not relevant in the present.*

*sōeca* ‘seek’

1st sg.pres.ind. *soeco* Mt. I 2, 5. J. 5, 30. 8, 50

2<sup>nd</sup> sg.pres.ind. *soecas* J. 4, 27; *soeces* J. 20, 15

3<sup>rd</sup> sg.pres.ind. *soecað* (10 times); *soecas* (6 times); *soecæs* Mt. 10,38

*insoeca* ‘seek’

2<sup>nd</sup> sg.pres.ind. *insoecas* Mt. I 12, 3

*wyrca* ‘form, work’

1st sg.pres.ind. *wyrco* Mt. 26. 18. J. (5 times); *uyrco* J. (5 times)

2<sup>nd</sup> sg.pres.ind. *wyrca*s L. 11, 45. J. (3 times); *wyrce*s J. 2, 18. 10, 33; *wyrca*s J. 6, 30; *wyrcað* J. 7,3; *uyrce*s J. 13, 27; *uirc*’ J. 3, 2

3<sup>rd</sup> sg.pres.ind. *wyrca*s Mt. Mk. L. (9 times). J. (4 times); *wircas* Mt. 5, 32; *wyrcað* Mk. 4,32. J. (7 times); *wyrceð* J. 5, 19; *uircað* J. 3, 21. 4, 1; *wycas* J. 7,4; *wyrce*s J. 11,47; *uyrcas* J. 14, 10; *wyrca*s J. 14, 12; *wyrca*ð J. 14, 12; *wyrceð* J. 19, 12; 1. 2

*gewyrca*

3<sup>rd</sup> sg.pres.ind. *gewyrcað* L. 9,25;

*gewyrca*s Mt. 1,21; *gewyrce*s Mt. 7, 17. J. I 3,3

*wæcca* ‘to watch’

3<sup>rd</sup> sg.pres.ind. *wæccað* Mk. I 3, 8

*geðenca* ‘think’

3<sup>rd</sup> sg.pres.ind. *geðences* Mt. 6, 27

*beðencan*

2<sup>nd</sup> sg.pres.ind. *beðences* Mt. 5.23

*ðenca*

3<sup>rd</sup> sg.pres.ind. *ðenegað* L. 14, 31

*ðynca*

3<sup>rd</sup> sg.pres.ind. *ðynces* Mt. 26, 66

*āweccan* ‘awake’

1st sg.pres.ind.

-o

*auoecco* J. 6.54, 11.11, *auecco* J. 2.19, *aueco* J. 6.40

2<sup>nd</sup> sg.pres.ind. *auecceð* J. 2.20

3<sup>rd</sup> sg.pres.ind. *auæcceð* J. 5.21, *awecces* Mt. 22.24

*bebycgan* ‘buy’

3<sup>rd</sup> sg.pres.ind. *bebycgeð* L. 22.36, *bebyges* Mt. 13.44

*bycga*

3<sup>rd</sup> sg.pres.ind. *bygeð* L. 22.36, *byges* Mt. 13.44

‘standard’ heavy Class 1 weak	apocopated	total
1st sg.pres.ind.	1	30

	syncopated	total
2 <sup>nd</sup> /3 <sup>rd</sup> sg.pres.ind.	0	175



## Appendix B The Weak Preterite

### B1 The weak preterite in Early West Saxon

#### (B1.1) *Short syllables in Class 1* (Cosijn 1888: §116)

*-ede*

*strewian* ‘to strew’  
*strewede* CP (H, C) 103.13

*gebyrian* ‘to bury’  
*gebyrede* ind. CP (H, C) 41.1, Or 52.36, 118.32, 162.32, cj. CP (H, C) 317.25

*derian* ‘to injure’  
*dere* Or 90.24, 230.16

*herian* ‘to praise’  
*herede* CP (H, C) 53.8, Or 254.14, *we heredon* CP (H, C) 213.1, cj *hereden* CP (H) 451.21

*styrian* ‘to stir’  
*styrede* CP (C) 306.5*h*

*werian* ‘to clothe’  
*werede* Or 164.35.34, 284.23, *-on* Or 280.21

*nerian* ‘to save’  
*generede* Chron 755

*werian* ‘to defend’  
*a-*, *bewerede* Or 134.19.25, 172.14, *-on* Or 210.33, 220.24, Chron 885, *-en* Or 138.10, 230.21

*fremman* ‘to perform’  
*gefremede* Or 172.2, *-on* Or 146.33, cj *ful(l)fremede* CP (H, C) 265.4, *-en* CP (H, C) 329.8

*gremian* ‘to provoke’  
*gremede* Or 156.14, *ge-gremedan* Or 158.26

*trymian* ‘to make strong’  
*(ge)trymede* CP (H, C) 73.2, Or 158.1, 194.14, Chron 430, *ge trymedn* CP (H, C) 89.19, 3 pl Or 194.17, cj *getrymede* CP (H, C) 213.22

*be- oferhelian* ‘to conceal’  
*be- oferhelede* CP (H, C) 105.4, CP (H) 459.19

*wenian* ‘to train’  
*wenedon* CP (H, C) 239.19

*cnyssan* ‘to press, strike’  
*cnyssede* Chron. praef. *cnyssedan* Or 96.9

---

---

Light stems (excl. *t/d*-final stems) total:  
x43 (0% syncopated)

---

---

#### t/d forms

*ahreddan* ‘to liberate’  
*ahredde* Or 1.10

*gelettan* ‘to delay’  
*gelette* Or 72.27

*settan* ‘to set’  
*sette* CP (H, C) 93.1, 261.14, 113.9, *-on* Or 4.3, *-an* Or 88.18, cj *gesette* CP (H, C) 131.15, 253.16, Or 206.26, 258.9, *-on* Or 72.3

---

Root-final *t/d* total:  
 x12 (100% syncopated)  
 x56, +2 *mænde CP*, + 5  
*mænde Or*.

---

(B1.2) Long syllables in Class 1  
 (Cosijn §120)

After vowel  
*x1 syncopated*  
 Chron 718

Root-final *r*

*aræran* ‘to raise up’  
*arærode* Chron 718

*færan* ‘to frighten’  
*afærde* Or 172.21

*fēran* ‘to journey’  
*(forð)ferde* Chron 63, *CP (H)* 835,  
*ferdon* Or 44.23, 46.9, 72.14, 88.9,  
 Chron 734, *-un* Chron 661, *CP (H)*  
 737

*gehī(e)ran* ‘to hear’  
*ic hierde* Or 138.18, *(ge)hi(e)rde CP*  
*(H, C)* 39.19, 253.17 etc. Chron 835  
*oferhierde* Or 54.28, *we hi(e)rdon CP*  
*(H, C)* 381.8, Or 286.7, Chron 851, *-*  
*un CP (C)* 210.9,  
 3 pl *(ge-, ofer)hi(e)rdon CP (H, C)*  
 3.33, Or 210.2, 236.17 etc. *-un CP (C)*  
 212.20, Chron 755  
 cj *gehierde CP (H, C)* 295.16, *-en CP*  
*(H, C)* 213.21, *CP (H)* 443.12, Or  
 202.21

*læran* ‘to teach’  
*lærde CP (H, C)* 125.7 173.16 etc, *-on*  
*CP (H, C)* 197.18, 239.18 etc., *-an Or*  
 184.1,  
 cj *lærde CP (H)* 385.28

*stī(e)ran* ‘to steer’

*(ge)sti(e)rde CP (H, C)* 33.10, 53.9,  
 257.12 etc., cj *Or* 190.21

---

Heavy root-final *r* total<sup>61</sup>:  
 x 115 (100% syncope, with the  
 exception of *arærode* (*Chron* 718),  
 which looks like Class 2)

---

Root-final *m*

*dēman* ‘to judge’  
*demde* Or 266.11, *gedæmde* Or  
 258.10, *-an CP (H)* 415.5  
 cj *(ge)demde CP (H, C)* 185.20, *CP*  
*(H)*, 307.18, *we demeden CP (H)*  
 415.8

*flīeman* ‘to cause to flee’  
*a-, gefliemde* Or 5.13, 82.5, 84.20,  
 236.25 etc. etc. Chron 552 etc  
*geflemde* Or 198.13, *-on* Or 44.15,  
 54.6, 98.16 etc, Chron 797, 514 etc  
 cj. *gefliemde* Or 126.13

*gīeman* ‘to heed’  
*giemde* Or 224.21

*gehæman* ‘to marry’

---

<sup>61</sup> The total includes those marked in  
 Cosijn 1888 by ‘etc.’: **x39 + 76 = 115**  
 +13 *hierde, CP*, +5 *Chron.*, +11 *Or*.  
 +2 *cp hierdon*  
 +4 *Or*.  
 +4 *Chron*.  
*lærde* x6 *Or*, +21 *CP*, *lærdon* x3 *Or*, +4  
*CP*  
 +2 *stierde Or*, +1 *cp*

*gehæmde CP (H) 415.17, hæmdon CP (H) 397.20*

*benæman* ‘to deprive’  
*benæmde Or 146.25, 284.22*

*(a)rīman* ‘to count’  
*(a)rimde CP (H, C) 99.7, Or 156.22,*  
*we (a)rimdon CP (H, C) 75.16, 179.11*

*(ge)rȳman* ‘to enlarge’  
*(ge)rymdon CP (H, C) 3.8*

*gesēman* ‘to compose, settle’  
*cj gesemde Or 114.18.24*

---

Heavy root-final *-m* total:  
x87<sup>62</sup> (100% syncope)

---

*Root-final -n (Cosijn §120)*

*(for-, on)bærnan* ‘to burn’  
*(for-, on)bærnde Or 1.6, 52.7, 94.15,*  
*Chron 685, -on Or 94.6, 144.32, 292.3*  
*cj forbærnden Or 92.20, onbærndon*  
*Or 200.15, ind. forbærdon Or 222.9,*  
*forbær[n]don Or 68.23*

*diernan* ‘to conceal’  
*diernden Or 234.1*

*gi(e)rnan* ‘to desire’  
*gi(e)rnde Or 148.30, -on Or 98.2,*  
*278.10*

*hīenan* ‘to humiliate’  
*hiende Or 130.20, 214.13, 258.6, -on*  
*Or 160.12*

*māenan* ‘to moan’

---

<sup>62</sup> x30, +30 *Or gefliemde*, +11 *Chron*, -on:  
+6 *Or*, +10 *Chron*.

*māende (meant) CP (H, C) 137.18,*  
*291.19 etc. (complained) CP (H, C)*  
*201.4, Or 5.23, 224.24 etc.*

*rīnan* ‘to rain’  
*cj rinde Or 268.16*

*(ge)- strīenan* ‘to gain’  
*gestriende, gestrynde CP (H, C) 9.11,*  
*stri(e)ndon CP (H, C) 333.15.17,*  
*343.23, Or 46.10, cj -on CP (H, C)*  
*333.18, Or 56.26*

*be-, ontȳnan* ‘to open’  
*ontynde CP (H) 309.17, Or 6.5,*  
*166.23, 248.8, -an Or 262.27*  
*cj be-, fortynde CP (H, C) 275.22, CP*  
*(H) 459.22*

*wēnan* ‘to believe’  
*ic wende CP (H, C) 465.15.21, 3 sg*  
*CP (H, C) 39.2, 113.15, -on CP (H, C)*  
*133.24, 213.6, -an Or 268.13, cj*  
*wende CP (H, C) 39.5, CP (H) 433.30,*  
*-en CP (H, C) 215.1, CP (H) 305.19,*  
*Or 218.19*

*(for)wiernan* ‘to hinder’  
*(for)- wiernde Or 164.29, 78.9, -on Or*  
*64.27, 216.31, 232.26*  
*cj wiernde Or 290.22*

---

Root-final *-n* total:  
x63<sup>63</sup> (100% syncopated)

---

*Root-final l*

*tōdāelan* ‘to divide’  
*todældon Or 1.2, 8.3, ge-, tod(a)eldun*  
*Chron 718, 12, 12*

*afȳlan* ‘to defile’  
*afȳlde CP (H) 421.9*

*gāelan* ‘to hinder’

---

<sup>63</sup> x56, +2 *māende CP*, + 5 *māende Or*.



*cj gælde CP (H, C) 171.23*

*gehælan* ‘to heal’

*gehælde CP (H) 399.14*

*tælan* ‘to blame’

*ðu tældest CP (C) 22.10*

*sð H, (ge)tælde CP (H, C) 39.21, 131.13, 207.17 etc, Chron 885, -on CP (H, C) 333.23, cj 355.17*

---

Root-final –l total:

x26<sup>64</sup> (100% syncopated)

---

Root-final g, ng, f

*gebīgan* ‘to bow’

*gebigde CP (H, C) 99.22, Or 124.9*

*(ge)brēgan* ‘to frighten’

*(ge)bregde CP (H, C) 53.11, CP (H) 443.19*

*(be)byrgan* ‘to bury’

*(be)byrgde Or 108.21, -an Or 184.7*

*ofadrýgan* ‘to dry up’

*ofadrygde CP (H, C) 71.11*

*oferfylgan* ‘to pursue’

*oferfylgde CP (H, C) 295.14*

*gemengan* ‘to mingle’

*gemengde CP (H, C) 167.23, ðu gemengdest CP (H, C) 355.3*

*tengan* ‘to hasten’

*cj tengden Or 108.9*

*adræfan* ‘to drive away’

---

<sup>64</sup> x15, + 10 *CP tælde*, +1 *Or. tælde*

*adræfde CP (H, C) 37.4, Or 228.12, 282.10, Chron 755, -on Or 66.35, 232.20, Chron 874*

*gedrēfan* ‘to disturb’

*ge gedrefdon CP (H, C) 31.2*

*(ge)hwi(e)rfan* ‘to change’

*(ge)hwi(e)rfde CP (C) 38.22, 98.22, CP (H, C) 257.18, Chron 601, cj CP (C) 364.18*

*gehwyrfde CP (H) 39.22, 99.22, cj CP (H) 365.18, ðu ahwyrfdes CP (H) 465.19*

*læfan* ‘to leave’

*læfde Chron 755, læfdon CP (H, C) 5.15*

*a-, (ge)līefan* ‘to permit’

*a-, geli(e)fde CP (H, C) 379.10, CP (H) 397.20, 451.29, 457.33, Or 118.9, 296.23, -on CP (H, C) 5.6, 363.6 etc, cj -en CP (H) 389.36, 467.30, Or 202.23, -on Or 102.19*

*oftyrfan* ‘to stone’

*oftyrfdon Or 172.28*

---

Root-final –g, –ng, –f total:  
x42 (100% syncopated)

---

Root-final –s

*wyrmsan* ‘to produce corrupt matter’  
*wyrmsde, wyrsmde CP (H, C) 259.1*

*utræsan* ‘to rush out’

*utræsde Chron 755*

---

Root-final –s total:  
x2 (100% syncopated)

---

Root-final  $\delta$ <sup>65</sup>

*cȳðan* ‘to make known’  
(*ge*)*cyðde* CP (H, C) 35.23, 93.13,  
103.3 etc ((*ge*)*kyðde* CP (C) 146.18,  
150.23) 32 H 19 C 2 Or., (*ge*)*cyde* CP  
(H) 389.21, 435.8, *cyððe* CP (C),  
380.10, *gecyðdon* Or 296.3, *cyðdon*  
Chron 755

*ge-*, *forneðan* ‘to dare’  
*geneðde* Or 118.3 = *genedde* Or  
156.10  
*forneðdon* Or 222.1

---

Root-final – $\delta$  total:  
x61 (100% syncopated)

Breakdown:

$\delta$ d – x38

$\delta\delta$  – x1

dd – x1

de – x2

---

Root-final –V+d<sup>66</sup>

*gebrædan* ‘to broaden’  
*gebrædde* Or 218.25 cj Or 132.4

*cīdan* ‘to chide’  
*ic cidde* CP (H, C) 247.23, 355.15, *ðu*  
*ciddest -sð* CP (H, C) 23.10, 3sg.  
*cidde* CP (H, C) 27.13, 89.17, CP (H)  
443.4, cj CP (H, C) 187.5

*fēdan* ‘to feed’  
*feddon* Or 46.10

*gefrēdan* ‘to perceive’

---

<sup>65</sup> Stem-final  $\delta$  + *de* sometimes becomes -*dde* (Cosijn 1888: §120).

<sup>66</sup> After vowels, stem-final *d* + *de* becomes a geminate after syncope has taken place (Cosijn 1888: §120).

*ic gefredde* CP (H) 431.17

*a-*, *gehyldan* ‘to bend’  
*gehydde* CP (H, C) 33.15, Or 116.26,  
*ahyddon* Chron 418

*lædan* ‘to lead’  
(*ge-*, *for*)*lædde* CP (H, C) 39.3, 125.8,  
CP (C) 304.7h, Or 52.27.32 etc, -*on*  
CP (H, C) 333.19, Or 218.34, cj *lædde*  
CP (H) 423.19

*geēaðmēdan* ‘to humiliate’  
*geeaðmedde* CP (H, C) 301.5, Or  
64.9, 112.32

*geniedan* ‘to compel’  
*geniedde* CP (H) 415.22, Or 66.3,  
82.18 etc (see footnote), *genieddon* Or  
44.18, 70.32 etc, cj -*on* Or 240.19  
total with *dd* 24x in Or.;

*geðiedan*, *underðiodan* ‘to render  
subject’  
*geði(e)dde* CP (H, C) 39.23, 353.3,  
*underðeodde*, -*iedde* CP (H, C)  
119.18, Or 264.25, 284.5, Chron 47,  
*underðiode* (marked as incorrect in  
Cosijn 1888) CP (H) 417.27

(*be*)*ðyðan* ‘thrust’  
(*be*)*ðydde* CP (H, C) 295.17 (cj, CP  
(H, C) 297.14) -*an* Or 158.6

*awēdan* ‘to rage’  
*aweddon* Or 234.16

---

Root-final –V+d total:  
x102<sup>67</sup>  
(100% syncopated)  
(100% geminates)

---

<sup>67</sup> All of these forms have geminates

*lædde*

x42 +2, +7, +24 =75

+20 niedde Or, +2 cp

+5 nieddon Or.

Root-final C+d<sup>68</sup>

*begyrdan* ‘to grind’  
*begyrdde Chron* 189

*gebendan* ‘to bend’  
*gebende Or* 236.13

*hi(e)rdan* ‘to harden’  
*hirde CP (C)* 212.8

*ieldan* ‘to delay’  
*i(e)lde CP (H, C)* 151.22

*gelendan* ‘to approach’  
*gelende Or* 98.23, 166.33, *Chron* 886,  
cj *-on Or* 56.25

*gescildan* ‘to shield’  
*gescilde CP (H)* 399.20

*a-, (for)sendan* ‘send’  
*a-, (for)sende CP (H, C)* 9.14, 37.8,  
143.4, 227.10, *CP (H)* 307.10, 405.33,  
429.13, *Or* 44.7, 112.13, 120.13, *-on*  
*Or* 4.28, 46.20, 92.6, 96.11, *-an Or*  
114.17, cj *sende CP (H, C)* 49.6.17  
etc.

*forspildan* ‘to destroy’  
*forspildon Or* 222.12

*fortendan* ‘to burn off’  
*fortendun Or* 46.12

*(a)- wendan* ‘to turn away’  
*ic awende CP (H, C)* 7.25, 3 sg. *CP*  
*(H, C)* 9.13, *CP (C)* 222.10, *CP (H, C)*  
241.5, *CP (H)* 465.28, *Or* 78.6,

*wendon CP (H, C)* 5.22, 7.2.3.5, *CP*  
*(H)* 405.30, *Or* 44.17, *-an Or* 54.6  
cj *wende CP (H, C)* 193.13, pl *awende*  
*Or* 82.22

*gewieldan* ‘to seize’  
*gewylde Or* 224.31

*andwyrđan* ‘to answer’  
*ic andwyrde CP (H, C)* 5.22, 3 sg  
*(ge)ondwyrde CP (H, C)* 39.20,  
197.19, *CP (H)* 443.25, *Or* 156.30,  
178.19, 232.8, *-on CP (H)* 443.13, *Or*  
44.11, 156.3, cj *geandwyrde Or*  
204.33

*tornwyrđan* ‘to address abusive words’  
*tornwyrđon Or* 54.2

after r d(d)

*hierd[d]e CP (H)* 213.8  
*begyrdde Chron* 189

---

Root-final –C+d total:  
x59  
(100% syncopated)  
(x2 are geminates r+d)

---

Root-final –w<sup>69</sup>

*forslāwan* ‘to hinder’  
cj *he forslāwde CP (H, C)* 285.4

*getrīewan* ‘to believe’  
*getrīewde Or* 148.17, *getrīewdon Or*  
82.25, (*fortruwdes ðu CP (H)* 463.25  
ist compromiss zwischen *fortrīewdes*  
und *fortruwodes*?)

*āðēwan* ‘to force away’  
*aðewde Or* 294.2

---

<sup>68</sup> Cosijn (1888: §120) notes that after  
consonants *dd* is simplified:

---

<sup>69</sup> The *w* remains after long vowels,  
but not after *r*.

*Root-final r+w (with w being lost):*

*gierwan* ‘to prepare’  
*giredon* Or 106.17, *geredon* Or 202.13, cj *gerede* Or 246.3 [*gierdon* CP (H) 469.1]

*sierwan* ‘to plan’  
*(be)si(e)rede* CP (H, C) 37.9, CP (H) 393.8, Or 84.24, 110.30, 116.25, 170.2, 274.3  
*besyrede* Or 76.19, -on Or 138.6, 144.35, cj *gesirede* CP (H) 435.4

*smierwan* ‘to anoint’  
*smirede* CP (H, C) 101.16

---

Root-final –w total:

x22  
(x7 syncopated)  
(x15 unsyncopated, with w dropped)

---

Root-final  $V+ -p, -c, -t$ <sup>70</sup>

*slāpan* ‘to sleep’  
*slæpte* CP (H, C) 101.18

*gewierpan* ‘to recover’  
pt. cj. *gewierpten* CP (H, C) 229.2

*hyspan* ‘to mock’  
*hyspton* Or 256.24

*(a-, ofer)drencan* ‘over drench’  
*(a-, ofer)drencte* CP (H) 413.11, Or 90.21, 294.4, -on Or 222.6, Chron 890

*(ge)īecan* ‘to increase’

---

<sup>70</sup> After  $-p, -c, -t$ , *de* becomes *te* (Cosijn 1888: §120). When  $t + t$  occurs, due to syncope the geminate is retained if the stem-final  $t$  is not part of a consonant cluster.

*(ge)i(e)cte* CP (H, C) 129.20, 161.18, 233.21, Or 216.16, -on Or 234.31

*besencan* ‘to sink’  
*besencte* Or 172.10

*spilcan* ‘to bind with splints’  
*ne spilcte ge* CP (H, C) 123.10

*tōstencan* ‘to scatter’  
*tostencte* CP (H, C) 217.22

*swencan* ‘to cause trouble to a person’  
*swenctan* Or 102.19, *geswencton* Or 214.19

*geðryccan* ‘to compress’  
cj *(ge)ðrycte* CP (H, C) 213.22

*wȳscan* ‘to wish’  
*wyscte* CP (H, C) 29.11, Or 256.26

*gebētan* ‘to improve’  
*gebette* Or 154.11, cj *gebeten* (Marked as incorrect in Cosijn) CP (H, C) 137.22 *gebetton* Or 98.27

*mētan* ‘to meet’  
*mette ic* CP (H) 445.21, 3 sg *(ge)mette* CP (H, C) 117.5, CP (H) 393.5, 415.23 etc, -on Or 78.25, Chron 755, cj *gemette* CP (H) 433.31, Or 242.12, -en Or 116.32, 134.31

*spætan* ‘to spit’  
*spætton* CP (H, C) 261.10

*aðrȳtan* ‘to weary’  
cj *aðrytton* Or 238.10

---

Root-final  $V+ -p, -c, -t$   
total:

x36  
(100% syncopated)

---

Root-final cons+t:

Degeminated:

*ēhtan* ‘to chase’

*ehton CP (H, C) 375.3, Or 262.11*

*fæstan* ‘to firm’

*befæste Chron 886, ge fæston, -un CP (H, C) 315.25, ne fæste ge CP (H, C) 317.1*

*agyltan* ‘to offend, become guilty’

*agylton CP (H, C) 123.5*

*hiertan* ‘to hearten’

*hierte CP (H, C) 53.11*

*oferhlæstan* ‘to overload’

*oferhlæston Or 176.27, -an Or 176.18*

*gelæstan* ‘to perform’

*gelæste Or 74.1, 76.25, 178.11, gelæston Or 280.22, Chron 878, -an Or 44.15*

*cj gelæsten Or 82.12, 190.20.32*

*gelihstan* ‘to lighten’

*gelihste CP (H) 419.30*

*lystan* ‘to cause pleasure’

*lyste CP (H) 459.3*

*anmēttan* ‘to encourage’

*geanmette Or 140.23*

*gerestan* ‘to rest’

*gerestan Or 70.9*

*tyhtan* ‘to stretch’

*tyhte CP (H, C) 51.21, 53.8*

*awēstan* ‘to waste, lay waste’

*a-, aweste Or 62.2, 90.20, 98.1, -on Or 48.8, 204.13.22, -an Or 44.16, 56.12, 92.2, 98.21, 142.19, 144.36, cj -en Or 114.31*

*fylstan* ‘to help’

*(ge)fylste Or 152.6, 154.27, 170.18, -an 162.2, cj gefylste Or 148.8, 150.34*

Variable:

*ðyrstan, ðyrste CP (H, C) 329.3, CP (C) 260.16*

*ðyrstte CP (H) 261.16, cj. ðyrste CP (H, C) 31.7*

---

Root-final C+t total:

*x47*

(100% syncopated)

*tt x 1*

---

Obstruent+sonorant clusters:

Obstruent+r

*afrēfran* ‘to comfort’

*afrefredon, -an CP (H, C) 125.25*

*hyngri(an)* ‘to be hungry’

*me hyngrede CP (H, C) 329.2*

*timbran* ‘build’

*(ic a)timbrede CP (H, C) 39.17, 3 sg. (ge)timbrede CP (H, C) 215.18, CP (H) 443.3, Or 62.15, 252.17.25, Chron 722, -on Or 48.10, 46.19, 60.21, 226.21, -an Or 2.15*  
*cj timbrede Or 262.22, 266.17, 284.9*

*ofersylefran* ‘to cover with silver’

*ofersylefredan Or 138.31*

(total 17)

obstruent + m:

*ðrysmān* ‘to choke’

*ðrysmde Or 142.22, aðrysemodon Or 224.34 in C*

wyrsmān ‘to produce corrupt matter’  
wyrsmde CP (C) 258.1, wyrmsde in H

obstruent +n:

syllable forming n 2 unsyncopated, x5  
syncopated. (nemde CP H C 347.15  
etc):

gebicnan ‘to point’  
gebi(e)cne CP (H, C) 311.5, Or  
156.25

nemde CP (H, C) 347.15, 357.23, CP  
(H) 385.35, 439.32  
tonemdon Or 8.4

obstruent +l:

bytle don, symblede, wrixleden (x4),  
syncopated (without epenthesis) in  
eglde x5 etc. sigelede x1 (chron 887)

---

**Total**

**obstruent+sonorants:**

Total syncopates (without  
epenthesis)

Total unsyncopated:

Total with syncope and  
epenthesis:

Total with epenthesis  
without syncope (trisyllabic  
forms):

---

Root-final geminates:<sup>71</sup>

ci(e)rran ‘to turn’

(be-, ge-, to)ci(e)rde CP (H, C) 33.15,  
99.10, 197.15, 297.9, Or 246.21,  
Chron 716, CP (C) 886, -on Or 17.21,  
46.5, 88.22.25, Or 112.5, 124.8,  
152.13, 192.36, 228.26, Chron 823,  
CP (H) 835, 867, CP (C) 878, cj ge-  
c(i)er don CP (H) 405.17, Or 82.10, -  
en CP (H) 445.33

(ā)mi(e)rran ‘to misguide’  
amirdon Or 162.26, cj mierende Or  
262.21

cennan ‘to bring forth’  
cendon Or 46.10

fyllan ‘to fill’  
gefylde CP (H, C) 51.9  
cj afielde Or 258.7, gefyl den CP (H,  
C) 137.22

**x32 (including one retained gem -  
gestillde)**

gestillan  
gestillde (CP (H) 183.25, gestilde CP  
(H, C) 353.20, CP (C) 182.25)

---

Root-final geminates total:  
x32  
(100% syncopated)  
ll x 1

---

---

<sup>71</sup> Root-final geminates are simplified  
when inflected (and syncopated).



Appendix B2  
Lindisfarne Weak Past Verbs

**(B2.1) Class 1 Weak verbs**

(B2.1.1a) Light forms

*gestriciga* ‘knit’

ind. pret. 3 pl. *gestricedon* Mt 4, 21.

*gestyriga* ‘excite’

ind. 3rd sg. pret. *gestyrede* Mk. 9, 20 ;

*geheriga* ‘to praise’ (can show –od or –ed in BT)

3rd sg. pret. *geherede* L. 16, 8.

*bewæriga* ‘to forbid’

ind. pret. 3 pl. *bewoeredon* L 11, 52

*efnegeheriga* ‘praise’

ind. pret. 3 pl. *efnegeheredon* L. I 4, 2

*feriga* ‘carry’ 1 (like *nerian*)

ind. pret. 3 pl. *feredon* Mk. 2, 3

*oferferiga*

ind. 3rd sg. pret. *of’ferede* Mk. 11, 16

*geferiga*<sup>72</sup>

pret. 3 pl. *geferedon* Mk. 1, 32

*gesmiriga* ‘annoint’ Class 1 (like *gierwan*)

ind. 3rd sg. pret. *gesmiride* L. 4, 18

3 pl. *gesmiredon* Mk. 16, 1

*smeriga* ‘to anoint’ Class 2 (but confusion with 1)

ind. pret. 3 pl. *smerdon* Mt. 9, 24

*smiriga* ‘annoint’

ind. 3rd sg. pret. *smiride* J. 9, 11. 11, 2

3 pl. *smiredon* Mk. 6, 13;

*geðenna* ‘to extend’ (-ede in BT)

(Class 1 like *fremman*)

ind. 3rd sg. pret. *geðenede* Mt. 12, 13. 12,49. 14, 31

*geðenna* ‘to extend’ (-ede in BT)

(Class 1 like *fremman*)

ind. 3rd sg. pret. *geðenede* Mt. 12, 13. 12,49. 14, 31

*getrymma* ‘to strengthen’ (trymde, trymede in BT)

pret. 1 sg. *getrymede* J. I, 34

2 sg. *getrymedis* J. 3, 26

3 sg. *getry’mede* L. I 2, 14. 22, 43;

*getrymede* L. 22, 59. J. 1, 32. 5,33.

5,37. 19,35; *getrymedo* J. 12, 17;

*getrymade* L. I 6, 13; *getrūmade* L. 3,

18; *getrumade* L. 9, 51

opt. 3rd sg. pret. *getry’mede* J. 1, 8

*ontrymma*

ind. pret.3 pl. *ontrymmmedon* L. 23, 23;

*ontrymedon* L. 23, 5

*ðerhgetrymma*

opt. pret. 3 sg *ðerhgetry’mede* J. 1.7

*ðerhtrymma*

ind. pret. 3 sg *ðerhtrymede* J 4.44

opt. pret. 3 sg *ðerhtrymede* J 2.25

*untryrmm(ig)a* ‘to make weak’ (Class

1 in Wright §526) ind. 3rd sg. pret.

*untrymade* J. 11, 2; *Untrymade* J. 4, 46

3 pl. *untrymigdon* J. 6, 2

*forestemma* ‘to hinder’

<sup>72</sup> like *nerian*



ind. pret. 2 pl. *f'estemdon* L. 11, 52  
*foretrymma* 'to strengthen' (like fremman)  
ind. 3rd sg. pret. *f'etrymede* J. 13, 21

*āðenna* 'to (like fremman)  
3rd sg. pret. *aðenede* Ml 8,3. 26,51.  
Mk.3,5. L. 5,13; *aðenide* L. 6, 10

Total: 50

## (B2.1.1b)

*Light geminates (Settan type, Wright & Wright 1925: §525)*

*besweðða* ind. 'to wrap' like fremman (§526)  
pret. 3 pl. *bisuēðdun* J. 19, 40

*sceðða* 'to oppress'  
ind. pret. 3 sg *sceðde* L. 4.35

*sweððan* and *sceððan* are classed as fremman types in Wright, but here they appear to behave like settan

*gesetta* 'set'  
1<sup>st</sup> sg. pret. *gesette* J. 15, 16; **gesett** L. 19, 22;  
2<sup>nd</sup> sg. pret. *gesettes* J. 20, 15;  
3<sup>rd</sup> sg. pret. *gesette* Mt. (13 times). Mk. (6 times). L. (12 times). J. (3 times); *gisette* J. P 187 8 ; *gesætte* Mk. I 3,4;  
3<sup>rd</sup> pl. pret. *gesetton* Mt. (3 times). Mk. (3 times). L. 17, 28. J. (5 times); *geseton* L. 1, 66. 23,26  
opt. pret. 3<sup>rd</sup> sg. *gesette* Mt 19, 13. L. 1,9;  
3<sup>rd</sup> opt. pret. pl. *gesetta* Mk. 6, 41;  
*gesete* L. 9, 16;

*onsetta*  
3<sup>rd</sup> sg. pret. *onsette* Mk. 8, 25. 10, 16;

x93

3<sup>rd</sup> pl. *onsetton* Mt. 27, 37. Mk. 11, 7. 15, 17. L. 19, 35

*setta*  
2<sup>nd</sup> sg. pret. *settes* L. 19,21  
3<sup>rd</sup> sg. pret. *sette* (13 times)  
2<sup>nd</sup> pl. pret. *setton* J. 11, 34  
3<sup>rd</sup> pl. pret. *seton* Mk. 15, 19  
opt. pret. 3<sup>rd</sup> sg. *sette* Mk. I 1, 17

*tōgesetta*  
3<sup>rd</sup> pl. pret. *togeseton* Mk. 8,6  
opt. 3<sup>rd</sup> pl. pret. *togesette* Mk. 8, 6

*ymbsetta*  
3<sup>rd</sup> sg. pret. *ymbsette* Mk, 15, 36  
3<sup>rd</sup> pl. pret. *ymbsetton* J. 19, 29

*ofāsetta*  
3<sup>rd</sup> sg. pret. *ofasette* L. 23, 53

*foresetta*  
3<sup>rd</sup> sg. pret. *foresætte* Mt. 13.31,  
*f'esette* Mk. I 3,3. L. I 5,16; *f'sætt* Mt. 13, 24.

*eftsetta*  
3<sup>rd</sup> sg. pret. *eftsette* Mk. I 3, 17. L. I 9, 19

## (B2.1.2) Heavy forms/two light (Class 1)

*foregelǣra* ‘to teach’ (long in BT)  
3rd sg. pret. *f’egelærde* Mt. I 16,4

*gerǣsa* ‘to rush’ (long in BT)  
ind. pret. 3 pl. *geræsdon* L. 5, 1

*ondǣla* ‘to impart’  
ind. 3rd sg. pret. *ondælde* L. 10, 34

*gestrīoniga* ‘gain’  
3rd sg. pret. *gestrionde* Mt. 1, 2. 25,  
17; *gestreonde* Mt. 21, 41

*cēiga* ‘to call’ -de, PP -ed 1 (no length  
mark in Cook, but long in Campbell +  
bt)  
pret. 1st sg. *ceigde* Mt. 2, 15;  
3rd sg. *ceigde* Mt. 1, 25. 15, 22. 20,32.  
Mk. 3, 13. 10,42. 12, 43. Lk. 8, 8. 8,  
28. 14, 16. 16, 2 J. 11,28. 18,33;  
3 pl. *ceigdon* Mt 20,30. Mk.3,31. 6,49.  
10,49. J. 9, 24. 12,13;

*tōgecēiga*  
ind. 3rd sg. pret. *togeceigde* Mk. 7,14;

*gecēiga*  
3rd sg. pret. *geceigede* L. 1,42;  
*geceigde* (17 times)  
3 pl. *geceigdon* Mt. 8,29. 10, 25. 14.  
26. Mk.15,13. 15,14. J.9,18

*tōcēiga*.  
ind. 3rd sg. pret. *toceigde* Mt. 18, 2

*efnecēiga*  
ind.pret.3.pl. *efneceigdon* Mk. 15.16

*efnegecēiga*  
3 sg. *efnegeceigde* Mk. 6, 7. L. 7, 19.  
18, 16; *efnegeceigede* Mt. 15, 32;

*geswīga* ‘to be silent’  
ind. pret 3 sg. *gesuigde* Mt 22, 12. Mk.  
14, 61; *geswigde* Mk. 10, 50  
3 pl. *gesuigdon* Mt I 21, 14. 12,23; L.

20,26  
opt. 3rd sg. pret. *gesuigade* L. 18,39

*ǣcgeðrēaga* ‘rebuke’  
ind. 3rd sg. pret. *aecgeðreade* L. I 7,  
11

*ālēsa* ‘to redeem’  
opt. 3rd sg. pret. *alesde* Mk. I 1, 18

*befōera* ‘to go’  
ind. 3rd sg. pret. *befoerde* L. 10, 30

*eftfāera*  
ind. 3rd sg. pret. *eftfoerd* L. 4.13,  
*eftfoerde* L. 24.51

*forafōera*<sup>73</sup>  
ind. 3rd sg. pret. *f’afoerde* L. 19, 28

*fōera*  
3rd sg. pret. *foerde* Mt. 19, 15. 20, 1.  
21, 33. Mk. (14 times), L. (22 times).  
J. 8, 1  
2 pl. *foerdon* Mk. 14, 48. L. 7, 24;  
*foerde* L. 7, 25  
3 pl. *foerdon* Mt. 14, 34. 28, 16. Mk.  
(8 times). L. (19 times)  
opt. 3rd sg. pret. *foerde* L. 8, 29. 9, 51

*forefōera*  
ind. 3rd sg. pret. *f’efoerde* L. 22, 47

*fromfāera*  
ind. 3rd sg. pret. *frōfoerde* Mk. 11, 19  
3 pl. *frōfoerdon* L. 7, 24. 10, 30. J. 6,  
66. 8, 9

*fromgefōera*  
ind. 3rd sg. pret. *frōgefoerde* Mt 25,  
14.

*gefōera*

---

<sup>73</sup> short in BT, but syncope expected. long  
in wright (§529).

ind. 3rd sg. pret. *gefoerde* Mt.3,5.  
4,18. 4,21. 9,9.11,1.12, 15. 13, 53. 14,  
13. 15, 21. 15, 22. 18, 28. 19,1. 20,3.  
24,1.26,39. Mk. 1 4,17. 7,30. 8,13.  
8,27. 11,11. 12,1. 13,1. 13,34  
3 pl. *gefoerdon* Mt. 8, 32. 22, 10  
opt. pret. 3 pl. *gefoerdon* L. 8, 31

#### *infōera*

ind. 3rd sg. pret. *innfoerde* L. 1,9.  
17,12; *infoerde* Mt. 8,5. L. 14, 1;  
*infoerde* J. 18. 15; *infoerde* Mk. 2,1.  
5,40. 6,56. 7,25. 11,15. L. 1,28. 1,40.  
6,6, 7,1. 7,36. 7,44. 7. 45, 10,36. 19,1.  
19,45. 22, 3. J. 6,22. 18,1; *foerde* in J.  
5,4  
2 pl. *innfoerdon* J. 4, 38  
3 pl. *innfoerdon* L. 24, 3; *infoerdon*  
Mt. 25, 10; *infoerdon* L. 8, 33. 11, 26.  
11,52 ( 2 ); *infoerden* Mk. 1,21

#### *oferfāera*

ind. 3rd sg. pret. *of'foerde* Mt. 15, 29.  
20,30. L.I 4, 15. 4,30. 10,32. 12,37.  
17,11. 18,37; *oferfoerde* Mt. 9, 1  
3 pl. *of'foerdon* Mk. 6, 53. 11, 20. L.  
6, 1  
opt. 3rd sg. pret. *of'foerde* J. 4, 4

#### *ofergefōera*

opt. 3rd sg. pret. *of'gefoerde* Mt. 8, 34

#### *offōera*

3rd sg. pret. *offoerde* L. 2, 37  
3 pl. *offoerdon* L. 8, 2. J. 12, 11

#### *ðonafoēra*

ind. 3rd sg. pret. *ðonafoerde* Mk. 2,14.  
7,31; *foerde* *ðona* J. 11, 54  
3 pl. *ðonafoerdon* Mk. 14, 26. L.  
19,32  
opt. pret. 3 pl. *ðonafoerdo* Mk. 16, 8

#### *brōema* ‘to rage’

3rd sg. pret. *bremmde* J. 11, 33. 11, 38

#### *dāla* ‘to divide’

3rd sg. pret. *dælde* Mk. 6,41. L. 15, 12

#### *gedāla*

opt. pret. 3sg. *gedaelde* Mt. 15, 35

#### *tōdāla*

3rd sg. pret. *todæle* Mk. 14, 3. L. 9,  
16. 10, 34. 11, 22  
3 pl. *todældon* Mt. 27, 35 (2).  
Mk.6,40. 15,24. L.23,34. J. 19. 24

#### *ðerhgedāla*

ind pret 3 sg *ðerhgedælde* Mt. I 22.5

#### *dōema* ‘to judge’

pret. 2 sg. *doemdest* L. 7, 43

#### *gedōema*

opt. 3rd sg. pret. *gedoemde* J. 3, 17

#### *ēcgeēca* ‘to increase’

ind.pret.3.sg. *ēcgeecte* Mt. I. 19.10

#### *efnegebēga* ‘to humble’

ind. pret. 3 pl. *efnegebegdon* L. 5, 6

#### *eftgebēga*

ind. 3rd sg. pret. *eftgebeg* L. 2, 7

#### *gebēga*

3rd sg. pret. *gebegde* L. 24, 12

#### *fromgebēga*

ind. 3rd sg. pret. *frōgebeg* J. 5, 13

#### *fordrȳga* ‘to dry’ (Class 1 but Class 2 ending here)

ind. pret. 3 sg. *f'drugade* L. 8, 6

#### *gedrȳga*

ind. 3rd sg. pret. *gedrygde* L. 7, 38. J.  
11, 2; *gegedrugade* Mk. 4,6(2). 11, 21;  
*gedrugde* Mt 21. 20

#### *ofdrȳga*

ind. pret. 1 pl. *ofdrygdon* L. 10, 11

#### *fordwīna* ‘to dwindle’ (strong in BT)

3rd sg. pret. *f'duīde* L. 14, 34

*forgæla* ‘to hinder’

ind. pret. 1 pl. *f’gældon* L. I 3, 8

*gedīa* ‘to suck’

ind. pret. 2 sg. *gediides* L. 11, 27

*gedrōefa* ‘to vex’

ind. 3rd sg. pret. *gedroefde* Mk. 9, 20.  
J. 11, 33

*geēca* ‘to increase’

ind. 3rd sg. pret. *geecte* Mt I 22, 1

*gefæla* ‘to overturn’ (short in BT, long in Cook)

ind. 3rd sg. pret. *gefaelde* Mt I 21.11.  
L. I 11,4

*gefōela* ‘to feel’ (if *gefeldan*)

ind. 3rd sg. pret. *gefoelde* Mk. 5, 29

*gegēma* ‘to heal’

3rd sg. pret. *gegemde* Mk. I 2, 13, 6, 5.  
L. 16, 9, 18,9

opt. 3rd sg. pret. *gegemde* Mk. 3, 2

*gehæla* ‘to heal’

pret. 3sg. *gehælde* Mt. I 18, 1. I 19, 19.  
Mk. 3, 10, 6, 5. L. I 4, 17, 9, 11, 9, 42.  
13, 14, 14, 4, 22, 51

3 pl. *gehældon* Mk. 6, 13

opt 3rd sg. pret. *gehælde* J. 4, 47

*gehēna* ‘to humble’

pret. 3 pl. *gehendon* Mk. 14, 64, 15, 3.  
L. 23, 10

opt. pret. 3 pl. *gehendon* L. 11, 54

*gehēra* ‘to hear’

pret. 1 sg. *geherde* J. 5, 30, 8,26, 8,40.  
15, 15

2 sg. *geherdes* J. 11, 41

3 sg. *geherde* Mt. (17 times). Mk. (11 times).  
L. (18 times). J. (11 times)

1 pl. *geherdon* Mk. 14, 58. L. 22, 71.

J. 4,42, 8,33, 12,34; *geherde* L. 4, 23

2 pl. *geherdon* Mk. 14, 64, J. 5, 37, 8,

47, 9, 27, 10, 20

14,28; *geherdon* J. 14, 24; *geherde* Mt.  
5,21, 5,27, 5,38, 5,43

3 pl. *geherdon* Mt. (13 times). Mk. (12 times).  
L. (15 times). J. (12 times);

*gherdon* L. 8, 18; *geherdo* Mk. 12, 18

opt. 3rd sg. pret. *geherde* Mt. 12,42

3 pl. *geherdon* Mk. 3, 9. L. 5,1, 5,15.  
6,17, 15,1

*gelæfa* ‘to leave’

3rd sg. pret. *gehlaefde* L. 9, 17

3 pl. *gelæfdon* J. 6, 12, 6, 13

*gelæra* ‘to teach’

3rd sg. pret. *gelærde* Mt. I 20, 15, 5, 2.  
9, 35, 13, 54, Mk. 6,6, 9,31, L. 11, 1.

J. 8, 28; *gelaerde* Mt. 1 3, 3, 1 17, 1

1 pl. *gelærdon* L. 13, 26

*læra*

pret. 1 sg. *lærde* Mt. 26, 55, J. 18, 20

2 sg. *lærdes* L. 13,26

3 sg. *lærde* Mt. 7, 29, 11, 1, Mk. I 3, 3,  
1, 21, 2, 13, 4,2, 11,17, 12,35, 12,38.

L. I 8, 10, 4, 15, 4, 31, 5, 3, 6, 6, J. 6,  
59, 7, 14, 8, 2, 8, 20; *laerde* Mt. I 20,  
10, 4, 23, Mk. 10, 1; *lærd* L. 23, 5;

*lærdæ* J. 7, 28

3 pl. *lærdon* Mk. 6, 30

*gelēfa* ‘to entrust’

3rd sg. pret. *gelefde* Mk. 5, 13, 11, 16.  
L. I 5,20, 4,41, 8,32, 8,51, J. 19, 38

opt. 3rd sg. pret. *gelefde* Mt. 14, 22, L.  
8,32

*gelēfa* ‘to believe’

pret. 1<sup>st</sup> sg. *gelefde* J. 11, 27

2<sup>nd</sup> sg. *gelefdest* Mt. 8, 13, L. 1, 20;

*gilefdes* J. 20, 29

3 sg. *gelefde* L. 1, 45, 11, 22, J. (5 times)

1 pl. *gelefdon* J. 4, 42, 6, 69, 16, 30

2 pl. *gelefdon* J. 10, 26, 16, 27; *gelefde*  
Mt. 21, 25, 21, 32, L. 20, 5

3 pl. *gelefdon* Mt. 21, 32, Mk. (4

times), L. 18, 9, 24, 11, J. (20 times);

gilefdon J. 20, 29; *gelæfdon* Mt. I 6, 6  
opt pret. 2 pl. *gelefdē* J. 5,46(2)  
3 pl. *gelefdon* J. 1, 7; *gelefdē* Mt.  
21,32

*lēfa*

ind. 3rd sg. pret. *lefde* J. 2,24

3 pl. *lefdon* J. 7.39

*ðerhgelēfa*

ind pret 3 sg *ðerhgelefdē* Mt. I. 18.6

*gēma* ‘to care for’

3rd sg. pret. *gemde* Mt. 9, 35. 19, 2;

*gēmdē* Mk. 1. 34

*gemāna* ‘to mean’

3rd sg. pret. *gemānde* Mk. 8, 12. L.  
12, 47

2 pl. *gemānde* Mt. 11, 17

3 pl. *gemāndon* L. 23. 27

*gemenga* ‘to mingle’

ind. pret. 3 sg *gemengde* L. 13, 1

*genemna* ‘to name’

ind. 3rd sg. pret. *genemde* Mt. I 16, 13.  
L. 6, 13

*genēolēca* ‘to move nearer’ (*laehte* pl.  
in BT)

3rd sg. pret. *geneolecade* Mt. 8, 5 ;

*geneolacede* Mt. 4, 3 ; *geneolecde* Mt.  
(15 times). Mk. 1,31. 6,21. 12,28. L.

(14 times). J. I 4, 14. 2, 13; *genealecde*

Mt. 8, 19. 21, 30; *genelecde* Mt. 1

8,21; *geneolecte* L. 7, 12; *geneolicde*

J. 1 3, 12; *geneolecde*

3 pl. *geneolecadon* Mt. 13, 10;

*geneolecedon* Mt. 5, 1; *geneolecdon*

Mt. (17 times). Mk. 6, 35. 10,35.

11,27. L. (8 times). J. 12,21;

*geneolecton* Mt. 14, 12. L. 8, 24;

*genealecdon* Mt. 15, 1. L5,30;

*genelecdon* Mt 15,12. 17, 19

*tōgenēolēca*

3rd sg. pret. *togeneolecde* Mt. 10, 7.

Mk. 1, 15. 14, 45. L I 10, 17;

*togeneolacede* Mt. 4, 17;

*toge[h]nealacede* Mt. 3, 2

3 pl. *togeneolecdon* Mt. 8, 25. 13, 27.

15,23. 16, 1. 24, 1. Mk. 10, 2. 11,1;

*togeneolosedon* Mt. 4, 11

*gesmēaga* ‘to search’

ind. pret 3 pl. *gesmeadon* Mk. 11, 31.

L. 20, 14; *gesmeaudon* L. 20, 5;

*gesmeawdun* Mt 16, 7

*gestāna* ‘to stone’

ind. pret. 3 pl. *gestāndon* Mt. 21, 35

opt.pret. 3 pl. *gestāndon* J. 10, 31

*gestīora* ‘to correct, direct’

ind. 3rd sg. pret. *gestiorde* L. I 5, 19

*stīora*

ind. 3rd sg. pret. *stiorde* Mk. 8, 30. 8,

33. L. I 5, 19; *stiordon* Mk. 10, 48;

*stioiredon* Mk. 10, 13

*getēla* ‘to accuse’ (-ede in BT)

pret. 3 pl. *geteledon* Mk. 9, 34. L. 1 8,

13; *geteldon* Mt. I 2, 18. 20,18. L. 12,

1

opt. pret. 2 pl. *geteldon* Mt. 12, 7

3 pl. *geteldon* Mt. 12, 10. Mk. 3,2.

12,13

*getȳna* ‘to hide’

ind. pret. 3 pl. *getyndon* Mt. 13, 15

*ontȳna*

3rd sg. pret. *ontynde* J. 9, 32; *oNtynde*

J. 9,17.

*untȳna*

3rd sg. pret. *untynde* (13 times)

3 pl. *untyndon* Mt. 2. 11

*hēra* ‘to hear’

pret. 3 sg *herde* Mk. I 4, 17. L. I 2,3;

*herde* L 2,37

2 pl. *herdon* Mt. 11,4. 26,65. L. 7,22;

*herde* Mt. 5,33; *herdon* Mt. 10,27

3 pl. *herdon* Mt. 13, 17. Mk. I 3, 9. 3, 8  
opt. pres. 3 sg. *here* Mt. 18, 17; 1 pl. *here* L.I, 74

*hrēma* ‘to boast’  
pret. 3 pl. *hremdon* J. 11, 33

*inrāsa* ‘to rush upon’  
ind. pret. 3 pl. *inræsdon* Mt. 7, 25. 7, 27

*intȳna* ‘to enclose’ (like *deman* §530)  
ind. 3rd sg. pret. *intȳnde* L. 3, 20

*lecga* ‘to lay’ (like *settan*)  
ind. pret. 3 pl. *legdon* Mt. 21, 8. Mk. 11,8. L. 19,36

*māena* ‘to mean’ (like *deman*)  
pret. 3 pl. *mændon* L. 8, 52

*rāsa* ‘to rush’ (like *deman*)  
ind. pret. 3 pl. *ræsdon* Mk. 3, 10

*slēpa* ‘to sleep’ (§513, like *laetan*, *ondraedan*, *raedan*) -te  
3rd sg. pret. *slepde* L. 8, 23  
3 pl. *slepdon* Mt. 27, 52

*geslēpa*  
ind. 3rd sg. pret. *geslepde* Mt. 8,24  
3 pl. *geslepdon* Mt. 13, 25. 25, 5;  
*geslepedon* Mt 25, 5

*smēaga* ‘to mediate’ (originally Class 3, now 2 according to wright in WS, but 1 here...)  
3rd sg. pret. *smeade* L. 12, 17  
3 pl. *smeadon* Mk. 2, 8

*swīga* ‘to be silent’ (-de in BT)  
3rd sg. pret. *swigade* Mt. 26, 63  
3 pl. *swigdon* Mk. 1, 22 ; *swigadon* L. 23, 56; *suigdon* Mk. 3, 4. 6, 51. 9,34. 10,32. L. 9,36. 14,4  
opt. 3rd sg. pret. *suigde* Mk. 10, 48  
3 pl. *suigdon* Mt. 20, 31

*tēla* ‘to blame’  
3rd sg. pret. *telde* L. 23, 11  
3 pl. *teldon* Mt. 21, 37. L. 7, 30. 8,53. 16, 14. 18,9. 23,36; *teledon* L. 20,20

*tōdōema* ‘to judge between’  
ind. 3rd sg. pret. *todoemde* L. 23, 24

*tōēca* ‘to increase’ (*ecte*)  
ind. pret. 1 sg. *toecade* Mt. I 1, 9

*tōgeēca*  
ind. 3rd sg. pret. *togeece* L. 3,20;  
*togēcde* L. 19, 11. 20, 11. 20,12;  
*togēcde* J. I 5, 13;  
3 pl. *togeection* Mt. I 3, 7

*tōscāna* ‘to break to pieces’  
3rd sg. pret. *tosceānde* Mk. 5, 4

*twīga* ‘inspire into doubt’  
3rd sg. pret. *tuiade* L. 9, 7; 3 pl. *tuiaton* J. 13, 22

*ðerhgeonga* ‘to go’ (strong in BT)  
pret 3 sg *ðerheode* L I 9.19, 5.15, 11.24, 19.1

*wōena* ‘to suppose’ (-de in BT, like *deman*)  
3rd sg. pret. *woende* Mt. 13,8. L. 3,23. J. 18, 4; *wende* J. 20, 15; *woende* L. 3, 15  
3 pl. *woendon* Mt. Mk. L. (6 times); *woendon* L. 24, 37; *uoendon* J. 11,13; *uoendo* J. 13,29

*clæða* ‘to clothe’  
ind. pret. 2 pl. *clæðdon* Mt 25, 36

*læða* ‘to accuse’ -de  
pret. 3 pl. *læðedon* Mt. 5, 44; *læðdon* L. 1,71

*forçyða* ‘to surpass’  
3rd sg. pret. *f̃cyðde* Mt. I 21, 12

*gecȳðā*

ind pret 3 sg *gecyðde* L. I 2.14, J. I.  
1.5

*cȳðā*

pret 3sg. *cydde* L.I 7. 11.

Class 1	Total number	Number syncopated	Number in -a-	Percentage syncopated
Light stems excl. dentals	50	3	5	6%
Light <i>t/d</i> stems	93	93	0	100%
Heavy stems	762	736	14	97%

	Total number	Number syncopated	Unsyncopated	In -a	Percentage syncopated	Notes
Class 1 dentals (heavy)	514	505	9	5	98	geminate created through syncope: 70
Class 1 light geminates in dentals	93	93	0	0	100	geminate reduced: 5

### *Root-final w forms*

*belēwa* ‘to betray’

opt. 3rd sg. pret. *beleede* Mk. 14, 10

*getrēwa* ‘to trust’ (treowan) (though in BT trewan is uncertain status)

pret. 3 pl. *getreoudon* L. 18,9;

*getreudon* Mt. 27, 20

*aedēawa* ‘to expose, reveal’

1 sg. *aedeaude* Mt 17, 3. J. 10, 32.  
17,6

2sg. *aedeauades* L. 10,21; *aedeaudes*

Mt 11, 25

3 sg. *aedeauade* Mt. I 16, 2. Mk. 9, 4.

L. 1, 11; *ædeaude* Mk. I 1, 9. L. I 3,13.

I 9,3. 2,15.4,5.9,8. 20,37. 22,43. J. I

1,8(2). I 8,6 I 8,8. 2,11.20,20:

*ædea(u)de* J. 21, 1; *ædeawade* Mt 2,

19. L. 24, 34. 24,40; *ædeawde* Mt

9,33. Mk. I 1, 7. I 5, 3; *aedeawde* Mk.

16, 9; *aedeude* J. 5, 20 ; *aetdeawude*

Mt 2, 7; *ætdeaude* Mt. 1, 20;

*aetdeaude* Mt 2, 13; *aeteawde* Mt 16,

17; *aeteaude* Mk. 16, 14. J. I 1, 5;

*aeteuwdæ* J. 21, 14; *eatdeaude* J. 21, 1  
 3 pl. *aedeaudon* Mi 27, 53; *aeteawdon*  
 Mt 1 5, 4  
 opt. 3rd sg. pret. *ædeawde* Mt 16, 1  
*ēawa* ‘to manifest’

opt.pret.3 pl *æwades* MK 3.12  
*geēawa* ‘to discover’  
 ind. 3rd sg. pret. *geeaude* Mt. 4, 8;  
*geeawde* Mt I 14, 8  
 opt. 3rd sg. pret. *geeaude* L. I 2, 17

1.3. Geminate forms (listed under the deman conjugation in Wright & Wright (1925: §530). Class 1 heavy)

The *fremman* types are not listed here, as they do not show geminate forms throughout the paradigm and class as light.

*geðrycca* ‘crush’ (bt *p.* *þrycte*, *þryhte*)  
 ind. 3rd sg. pret. *geðryde* Mt. I 3, 7;  
*giðryde* J. P 188.3  
 1 pl. *geðryhton* Mt. I 3,4

3 pl. *gecerdon* L. 2, 39. 2,45. 7,10

*cerra* ‘to turn’  
 3rd sg. pret. *cerde* Mt 21,12

*gespilla* ‘to destroy’  
 3rd sg. pret. *gespilde* L. 16, 1. 17, 29;  
*gispilde* L. 15, 13

*efnegecerra*  
 ind. 3rd sg. pret. *efnegecerrde* Mt. 16,  
 23; *efnegecerde* Mk. I 4, 11. 5.30. L.  
 7,9. J. 1,38;  
 3 pl. *efnegecerrdon* Mt 17, 22

*gefylla* ‘to fill’  
 3 sg. *gefylde* L. 7, 1; *gefylde* Mt. 11,  
 1. 27, 48. Mk. I 3, 18. 15, 36. L. 16,4.  
 1,53. J.I 4, 15  
 3 pl. *gefyldon* L. I 9, 7. 5,7. J.2,7. 6, 13

*eftcerra*  
 3rd sg. pret. *eftcerde* L. 1, 56. 8,37.  
 14,21  
 3 pl. *eftcerdon* L. 2, 20. 2, 43. 9, 10.  
 10, 17. 23, 56: *eftcerrdon* L. 23,48  
 opt. pret. 3 pl. *eftcerdon* Mt.2.12;  
*eftcerrde* Mt. 2, 12

*gecyssa* ‘to kiss’  
 ind. 3rd sg. pret. *gecyste* L. 7, 38  
 opt. 3rd sg. pret. *gecyste* L. 22, 47

*cenna* ‘create’ (like *deman*)  
 ind. 3rd sg. pret. *cende* Mt. 1, 2(3). 1,  
 3( 3 ). 1,4 (3)1,5(3). 1,6(2). 1,7(3). 1,8  
 (3)1,9(3). 1.10(3). 1,11. 1,12 (2)1,  
 13(3). 1, 14(3). 1, 15(3). 1, 16

*eftgecerra*  
 3 sg. *eftgecerde* Mt. 21, 18. Mk. 14,40  
 3 pl. *eftgecerrdon* Mt. 2, 12

*gecenna*  
 3rd sg. pret. *gecende* Mt. 1, 25  
 3 pl. *gecendon* Mt. I 4, 1

*ofcerra*  
 ind. 3rd sg. pret. *ofcerde* Mk. 11, 15  
 3 pl. *ofcerdon* L. 9,12

*gecerra*  
 3rd sg. pret. *gecerde* Mt. I 3, 1. 9, 22.  
 Mk. 1 4, 19. (*gecerde* *ymb*) 8,33. L.  
 15, 17. 17,7. 19,7. J. I 3, 11

*ymbcerra*  
 ind. 3rd sg. pret. *ymbcerde* J. I 3, 11.  
 2, 15. 5, 4. 21,20

*āfirra* ‘to remove’  
 ind. 3rd sg. pret. *afirde* Mk. 1, 34



opt 3rd sg. pret. *afirrade* Mk. 5, 17

*āspilla* ‘to destroy’

opt. pret. 3 pl. *aspildon* J. 12, 10

*spilla* ‘to destroy’

pret. 1 sg. *spildic* J. 18, 9

3 sg. *spilde* L. 17, 27

opt. pret. 3 pl. *spildon* J. 11, 53

*ācenna* ‘produce’

3rd sg. pret. *acende* Mt. I 2, 9. L. 1, 24. 1, 36. 1, 57

3 pl. *acendon* L. 23, 29

*ācwoella* ‘to kill’

opt. pret. 3 pl. *acuoeldon* J. 11,53;

*acuoledon* J. 12, 10

Class 1 heavy gem	Total number	Number syncopated	Unsyncopated	In - a	Geminate retained	% syncopated
	112	111		1	7	

Forms with a pret. without –I in Prim Gmc (including /ll/ forms which form their geminate on analogy with type 1(a) according to Wright:

*tōcnycca* ‘to tie’ (cnycte, cnyhte in bt)

ind. 3rd sg. pret. *tocnuicte* Mt. I 8, 15

*gesella* ‘to give’

pret. 2 sg. *gesaldest* Mt. 25,22;

*gesaldes* Mt.25,20. 25,35. L. 15, 29. J.

17,2. 17, 6( 2 ). 17,7. 17,8. 17,9.

17,12. 17,24;

3sg. *gesalde* Mt. (5 times). Mk. (3

times). L. (4 times). J. (8 times);

*gisalde* J. P187 13

2 pl. *gesaldon* Mt. 25, 35;

3 pl. *gesaldon* Mt. 27, 10; *gesaldon*

Mt. 1 5, 3. 24, 38. Mk. 15.10. L.1,2. J.

18, 35;

opt. 3rd sg. pret. *gesalde* J. 13,13. 4,10

1 pl. *gesaldon* J. 18, 30

3 pl. *gesaldon* Mt. 26, 59

*sella* (wgg – ll formed pret on analogy with type a)

pret. 1 sg. *salde* (6 times)

(153: all syncopated)

2 sg. *saldest* L. 7,44. 7, 45; *saldes* L.

19, 23. J. 17,2. 17, 22. 17,24; *sealdes*

J. 17, 4. 17, 11

3 sg. *salde* (59 times); *sealde* Mt

25,15. 26, 27. Mk. 14,22; *salde* Mk.

13. 34;

1 pl. *sealdon* Mt 25, 37; 2 pl. *sealdo*

MI 25, 42; *saldon* MI 25, 42; *saldon*

Mk. 7,13;

3 pl. *saldon* (10 times); *saldon* MI 13,

8; *sealdon* MI 27,34. J. 19,3

opt. 3rd sg. pret. *salde* (6 times)

3 pl. *saldon* L. 2, 24. 20, 10. 20, 20

*ymbsealla*.

pret. 3sg. *ymbald* Mt. 21, 33;

*ymbalde* Mk. 12, 1. L.5, 9. J. 21, 7

3 pl. *ymbaldon* J. 10, 24. 19,2;

*ymsaldon* Mt. 27, 28

*gecwoecca* ‘to move’

ind. pret. 3 pl. *gecoecton* L. 6, 1

#### 1.4. Class 1 weak heavy forms ending in a dental

##### Long vowel+dental:

*gebōeta* ‘to mend, repent’

3rd sg. pret. *geboette* L. I 7, 5; *geboeta*

Mt. 4,24

3 pl. *geboeton* Mt 4, 21

opt. pret. 3 pl. *geboeton* L. 10, 13

*eftgebōeta*

3rd sg. pret. *eftgeboette* L. 1 11, 7;

*eftgebōedte* Mt. 1 18, 5

*āgroēta* ‘to attack’ (Wright §531, like *drencan*)

ind. 3rd sg. pret. *agroette* L. 9, 42

*groēta*

ind. pret 3 pl. *groeton* Mk. 9, 15

*gegroēta*

ind. 3rd sg. pret. *gegroette* L. 1,40

opt. pres. 2 sg. *gegroeta* L. 8, 28

*āhȳda* ‘to hyde’

ind. 3rd sg. pret. *ahydde* J. 8, 59

*tōlāda* ‘to bring’ (like *deman*)

ind. 3rd sg. pret. *tolādde* J. 1 3, 9

3 pl. *tolāddon* Mt 21, 7. Mk.7,32.

8,22. 14,53

*ðerhlāda*

ind pret 3pl *ðerhlādon* Mk 15.22

*ofgelāda*

ind. 3rd sg. pret. *ofgelāde* Mk. 8,23

3 pl. *ofgelādon* Mt. 13,48

*ðonagelāda*

ind. pret. 3 pl. *ðonagelāddon* Mk.

15,20

*oflāda*

ind. 3rd sg. pret. *oflādde* L. 24, 50;

*oflāde* Mk. 14, 47

*ingelāda*

ind. 3rd sg. pret. *inngelaede* Mt. I

5,15; *In gelāded* Mt. 24,24

*inlāda*

3rd sg. pret. *inlādde* L. I 9, 3; *inlādde*

J. 18, 16

3 pl. *inlāddon* L. 2, 27

*lāda*

pret. 1 sg. *lāde* L. 14,20;

3 sg. *lādde* Mt. I 6, 14. 17, 1. Mk.

6,17. 9,2. L. 4, 5. 4,9. 10,34; *lāde* L. 1

8, 20

3 pl. *lāddon* Mk. 11, 7. 15, 16. L. 2,

22. 4, 29. 22;

54. 22, 66. 23, 1. J. 8, 3. 18, 13. 19,

16; *lādon* Mk. 6, 29. L. 2, 19. 2,22.

4,40. 17,27. 19,35

*gelāda*

3rd sg. pret. *gelādde* Mt. 27, 3. Mk.

15, 1. L. 23, 26. J. 18, 28; *gelādon* Mt.

26, 57; *gelaedon* Mt. 27, 2

opt. pret. 3 pl. *gelādde* Mk. 6, 8

*efnegelāda*

ind. 3rd sg. pret. *efnegelāde* Mt. 20, 7

*rēda* (‘gather/ appoint in Latin’)

pret. 3 pl. *redon* J. 19,20 (MS *reddon*

alt. to *redon*)

*rocgeta* ‘to erupt, spring forth’ -te

ind. 3rd sg. pret. *rocgetede* J. P187 12

*nēda* ‘to force’ -de

pret. 3 pl. *nedon* L. 24,29

*oferbrāda* ‘to overspread’

ind. 3rd sg. pret. *ofbrādde* L. 9,34;

*of'bræde* Mk. 9, 7.

*bræda*

ind. pret. 3 pl. *brædon* Mk. 11, 8

*geondeta*

3rd sg. pret. *geondete* J. I 3, 6;

*geondate* J. 1, 20

3 pl. *geondeton* Mt. 3, 6

opt. 3rd sg. pret. *geondetate* J. 9, 22

*gewōeda* 'to rage' -de

pret 3 pl. *gwēdon* Mt. 27, 28

*forebræda* 'to broaden'

ind. 3rd sg. pret. *f'bræde* Mk. 9, 7

*gebræda*

pret. 3 pl. *gebrædon* Mt. 21,8;

*gebredon* Mt. 21,8

*gefōeda* 'to feed' (*fedde*, bt)

ind. 3rd sg. pret. *gefoede* Mt. 8, 30

3 pl. *gefoedon* L. 23, 29

opt. 3rd sg. pret. *gefoede* L. 15, 15

*gehȳda* 'to hide' (Wright §530)

pret. 1 sg. *gehydde* Mt. 25, 25

2 sg. *gehyddest* L. 10, 21

3 sg. *gehydde* Mt. 13, 33. 13, 44. 25,

18. J. 12, 36

*fōeda* 'to feed'

pret. 3 pl. *foeddon* Mk. 5, 14

*gemoēta* 'to find, meet with'

pret. 1 sg. *gemoete* L. 7, 9. 13, 7. 15,

6. 23, 14; *gemitte* L. 23, 22

3 sg. *gemoette* Mt. 20, 6, J. (6 times);

*gemoete* Mt. 12, 43. 26, 40. 26, 43. L.

11, 24. 11,25. 13,6. J. 2, 14. 12,14;

*gemitte* Mt. 18, 28. Mk. 7, 30. 11,

13(2). 14,40. L.4,17. 22,45; *gemitta*

Mk. 14, 37

1 pl. *gemoetton* J. 1,41; *gemoettun* J.I, 45

3 pl. *gemoetton* Mk. 14, 16. L. 22, 13;

*gemoeton* Mt. 27, 32. L. (12 times). J.

6, 25; *gimoeton* Mt. I 4, 7; *gemōeton*

L. 24, 2; *gemoetdn* L. I 4, 2; *gemitton*

L. 23, 2

opt. pret. 3 pl. *gemoete* L. 6, 7

*genēda* 'to compel'

ind. pret. 3 pl. *geneddon* Mt. 27, 32.

Mk. 15, 21

### VC+dental:

*eftāwæлта*

wv ind.pret.3.sg. *eftāwælte* Mt 28.2

*tōwæлта* 'to roll' (-de)

ind. 3rd sg. pret. *towælte* Mk. 15, 46

*ādūnesenda* 'send' -de (like *cerran*, *cierran*)

ind. pret. 3 pl. *adunesendon* Mk. 2, 4

*āsenda*

ind. pret 3sg. *asende* Mt 27, 50. J.5,

23. 5,24. 5,30. 5,36

*senda*

pret. 1 sg. *sende* (5 times)

2 sg. (pres.?) *sendes* J. 11,42. 17,3.

17,18. 17,21. 17, 23; 3 sg. *sende* (97 times);

3 pl. *sendon* (15 times)

opt. 3rd sg. pret. *sende* Mk. 3, 14

*tōsenda*

ind. 3rd sg. pret. *tosende* L. I 3, 1

*gesenda*

ind. pret. 2 sg. *gesendes* J. 17,8. 17, 25

3 sg. *gesende* Mt. 11,2. Mk. 15,37. J.

3, 17. 4,34. 6, 57. 13,2  
 3 pl. *gesendon* Mt.4, 18. 13,48. L.  
 21,1. J. 1,19. 1,22. 5, 33  
*no \*sended*

*efnesenda*  
 ind. 3rd sg. pret. *efnesende* Mk. 10, 11

*eftsenda*  
 ind. pret. 1 sg. *eftsende* L. 23, 15  
 3rd sg. pret. *eftsende* L. 23, 7. 23, 11

*dūnāsenda*  
 ind.pret. 3 pl. *dunasendon* L. 5, 19

*āhāelda* ‘to hold’  
 ind. pret. 3 pl. *ahaeldon* L. 24, 5

*woenda* ‘to turn’  
 pres. 3 pl. *wendas* Mt. I 17, 17  
 ind. 3rd sg. pret. *woende* L. 4, 10

*donagewoenda*  
 ind. 3rd sg. pret. *donagewoende* Mt. 4,  
 12; *gewoende* *đona* Mt. 2, 22

*ymbwoenda*  
 ind. 3rd sg. pret. *ymbuoende* J. 20, 14.  
 20, 16

*āwoenda*  
 3rd sg. pret. *awoende* L. 19, 15

*gewoenda*  
 3rd sg. pret. *gewoende* L. I 9, 9. 15, 17

*eftgewoenda*  
 ind. 3rd sg. pret. *eftgewende* Mt. 1 19,  
 7; *eftgewoende* Mt. 2, 14  
 3 pl. *eftgewoendon* Mt. 2, 13

*āspēafta* ‘to spit out’  
 ind. pret 3 sg. *aspeaft* J. 9, 6

*spēafta*  
 ind. 3rd sg. pret. *speaft* Mk. 8, 23  
 3 pl. *speafton* Mt. 26, 67. Mk. 15, 19;  
*speoifton* Mt. 27, 30

*āstylta* ‘to be amazed’  
 ind. pret 3 pl. *astylton* L. 2, 47;  
*astyltdon* L. 4,32

*stylta*  
 ind. pret. 3 pl. *stylton* Mk. 6, 51. J.  
 13,22; *styldon* Mk. 1, 22

*gestylta*  
 ind. 3rd sg. pret. *gestylte* Mk. 9,15  
 3 pl. *gestyldon* L. 8, 56; *gestylton* Mt.  
 12, 33

*forestylta*  
 pret. 3 pl. *f'estyldton* Mk. 5, 42;  
*f'estylton* Mk. 16,5  
*forstylta*  
 ind. pret. 3 pl. *f'styldton* Mk. 10, 24

*āswelta* ‘to die’  
 ind. 3rd sg. pret. *asuelte* Mk. 15, 37

*swelta* ‘to die’ \*strong in Wright  
 opt. 3rd sg. pret. *suoelte* J. 11, 37

*geswelta*  
 3rd sg. pret. *gesuelte* Mk. 15, 39

*āwoerda* ‘to injure’  
 ind. pret. 3 pl. *awoerdon* L 20. 11;  
*aweredon* L. 18. 9 \*epenthesis

*geondwearda* ‘to answer’  
 3rd sg. pret. *geonduearde* Mt. (13  
 times). Mk. (7 times). L. (6 times). J.  
 (23 times); *geonduearde* Mk. 6, 37;  
*geonduarde* Mt. (3 times). Mk. (2  
 times). L. (7 times). J. (12 times);  
*geonduærde* L. I 10, 13. J. 1, 21. 13,  
 26; *geonduard* J. 10,32.  
 18,20; *geonduaR* J.9,11; *geondU* J. 9, 3  
 ; *geonduorde* Mt. 20, 22. L. I 7, 7. J.  
 14, 23; *geonduorde* Mt. 12, 48;  
*gewondworde* Mt. 22, 1  
 3 pl. *geondueardon* Mt. 21,27. Mk. 8,  
 4. J. 2, 18. 8,48. 9,20. 9,34. 18,30;  
*gionduardon* J. 21, 5; *geondueardun*

J. 8, 33; *geonduardon* J. 7, 52. 10, 33.  
18, 5. 19,15; *geonduærdon* J. 8, 39;  
*geonduordon* Mt. 25, 9;  
*gewondueardon* Mt. 12, 38. 14, 17

*ondwearda*

3rd sg. pret. *onduearde* (38 times);  
*onduarde* Mt 12, 39. 15, 15. 19,27. L.  
3, 11. 3, 16. 4,4. 10,41. 13,8. 21,14;  
*ondworde* Mt. I 7, 3. 15, 3; *onduorde*  
Mt 24, 2. 26,23; *ondearde* Mk. 10, 24  
3 pl. *ondueardon* Mk. 8, 28. 11, 33. J.  
7, 46; *onduardon* L. 17,37

*bēafta* ‘to lament’ (beafte, -ode)

ind. pret. 1 pl. *beafton* Mt. 11, 17

*ymbgyrda* ‘to bind round’ (like

*sendan*, *cerran*)

ind. 3rd sg. pret. *ymbgyrde* J. 13, 4

*ðyrsta*

3rd sg. pret. *ðyrste* Mt. 25, 42;

*tōrenda* ‘to tear in pieces’ (stressed  
‘tp’ §656)

ind. 3rd sg. pret. *torende* Mk. 14, 63

*renda*

ind. pret. 3 pl. *rendon* Mk. 11. 8

*ræsta* ‘to rest’

3rd sg. pret. *hræste* Mk. 4, 39

*geræsta*

3rd sg. pret. *geræste* Mt. I 6, 14;

*giræsti* J. 21, 20

3 pl. *geræstun* Mt. 9, 10; *gehræston* L.  
13, 19; *geræston* Mk. 2, 15

*eftgeræsta*

ind. 3rd sg. pret. *eftgeræste* L. 24, 30

*inlīhta* ‘to enlighten’ (-te in BT)

3rd sg. pret. *inlichtade* J. I 6, 1; *inlihte*  
L. 1, 79

*geoēhta* ‘to follow, persecute’ -te

pret. 3 pl. *geoehtadon* J. 5, 16;

*geoehnton* Mt. 5, 12. J. 15, 20

*gerihhta* ‘to correct’

ind. 3rd sg. pret. *gerihðe* L. 3, 19

*gescenda* ‘to shame’

3rd sg. pret. *gescende* L. I 8, 10

*gescilda* ‘to shield’

ind. 3rd sg. pret. *gescilde* L. I 8, 8

3 pl. *gescildon* Mt I 5, 9

*gescyrta* ‘to shorten’

pret. 3sg. *geseyrdte* Mk. 13,20;

*gescyrte* J. 2, 3

opt. 3rd sg. pret. *gescyrte* Mk. 13, 20

*gewæhta* ‘to roll’

ind. 3rd sg. pret. *gewælte* Mt. 27, 60

*gebēlda* ‘covered’

pret. 3 sg *gibēlde* J. P 188(3)

*gefæsta* ‘to fast’

3rd sg. pret. *gefæste* Mt. 4, 2. Mk. 12,  
1

3 pl. *gefæsdon* Mt. 9, 15; *gefeast*’ L.  
12,48

*gehyhta* ‘to hope’

ind. pret. 1 pl. *gehyhton* L. 24, 21

*hyhta* ‘to hope’ BT *p. te* Wright §530  
(like *deman* in Wright)

3rd sg. pret. *hyhtade* L. 23, 8

*gehyrsta* ‘to adorn’ (Wright §530)

ind. pret. 3 pl. *gehyrston* L. 15, 2

## 1.6. Class 1 forms ending in an obstruent+sonorant cluster

### Long root + cons+son

*lēðra* ‘to lather’ (obs son) (lithran)

ind pret 3 sg *leðrede* J. 11.2

*getimbra* ‘build’

3rd sg. pret. *getimberde* Mt. 7, 26.

21,33. Mk. 12, 1. L. I 5, 9; *getimbrade* L. 7, 5

3 pl. *getimberdon* L. 17, 28;

*getimbredon* Mt. I 21, 18;

*getimbradon* Mk. 12, 10

\*syncope in one place or the other...

no *timberedon*

*geglendra* ‘to devour’ Wright &

Wright §532<sup>74</sup> -ade, -ede.

opt. pret. 3 pl. *geglendradon* L. 4, 29.

*hyngra* ‘to be hungry’

3rd sg. pret. *hyngerde* Mk. 2,25;

*hyngcerde* Mt. 21, 18

3 pl. *hyncerdon* Mt. 12, 1

*gehyngra* ‘to be hungry’ \*note

epenthesis in stem.

pret.1 sg. *gehyncgerde* Mt. 25, 35

3 sg. *gehyncgerde* Mt. 4, 2. 25, 42 ;

*gehyngerde* Mt. 12, 3. L. 4, 2. 6, 3;

*gewyncerde* Mk. 11, 12

*froēfra* ‘to soothe’

ind. pret. 3 pl. *froefredon* J. 11, 31

*hwæstriga*. ‘whisper’

ind. pret. 3 pl. *huæstredon* Mt. 20, 11;

J. 6, 61; *hwæstredon* J. 6,41;

*huuæstredon* L. 19, 7 \*(phonotactics against syncope?)

### Short vowel + cons+son

*ādrysna* ‘quench’ (-ede in bt)

ind. 3rd sg. pret. *adrysnede* Mk. I 3,6

*gedegla* ‘to hide’ (Class 1/2 in BT ode/ede)

3rd sg. pret. *gedegelde* L. 1,24. 8, 17

*gedeigeldes* Mt. 11,25

*gedrysn(i)a* ‘to quench’ (-ede in bt)

ind. 3rd sg. pret. *gedrysnade* L. 24, 31

<sup>74</sup> According to Wright this is like *hyncgran*, *biecnan*, *dieglan*, *frefran*, *symlan*, *timbran* *wrixlan*, *efnan*, *bytlan*, *eglan* *faefnan*, *eglan*, *raefnan*, *seglan*, *thryzman* (Wright: §222). Class 1 (-ede even if heavy) but verbs of this kind often went into Class 2)

*gefræpgiga* ‘accuse’ \*epenthesis  
ind. pret. 3 pl. *gefræppegedon* Mk.  
12,6  
opt. pret. 3 pl. *gefræpgedon* Mt 12, 10

#### sonorant+sonorant

*āwoērga* ‘to ward off’ (medial vowel  
not long in BT) (like *nerian* in Wright)  
ind. pret. 3 pl. *awoerigdon* J. 9, 28;

*āwyrge* ‘to strangle’  
ind. 3rd sg. pret. *awurigde* Mt. 27, 5.

*bebyrga* ‘to bury’  
pret. 3 pl. *bebyrgdon* Mt. 14, 12

*aeftærfylga* ‘to follow’  
pret. 3 pl. *aeft’fylgdon* Mt. 21,9

*fylga*  
3rd sg. pret. *fylgede* Mk. I 4,16. 5,24.  
J. 6, 2; *fylgde* Mk. 10, 52. L. 18, 43.  
20, 30. 23, 27. J. 20, 6  
1 pl. *fylgede* Mt. 19, 27; *fylgdon* Mk.  
10, 28  
3 pl. *fylegdon* Mt 27, 55; *fylgedon* Mk.  
1, 20. 6, 1; *fylgdon* Mt. 8,10. 12,15.  
Mk. 2,15. 10,32. 11, 9. 15, 41. L. 18,  
28

*gefylga*  
3rd sg. pret. *gefylgede* Mt. 26,58. Mk.  
14,51. J. 18,15; *gefylgde* Mt. 9, 19. L.  
12,2. 22,54; *gefuilgide* Mt. I 3, 3  
3 pl. *gefylgdon* Mt. 1 16, 10. 1 21, 2.  
4, 20. 4, 22. 4, 25. 8, 1. 8, 23. 9, 27.  
19, 2

\*epenthesis and syncope interaction:

*fræpgiga* ‘accuse’  
ind. pret. 3 pl. *fræppigdon* Mt. 21, 37.

*offylga*  
ind. 3rd sg. pret. *offylgde* L 1, 3

*underfylga*  
ind. pret 3 pl. *underfylgdon* L. 23, 55

*gebirga* ‘bury’  
pret 3 sg. *gebirigde* Mt. 27,34  
3 pl. *gebirigdon* Mk. I 4, 3

*biwærla* ‘to pass by’  
3rd sg. pret. *biwærldde* L. 10, 31

*ymbwærla* ‘to turn’ (-de)  
ind. 3rd sg. pret. *ymbwærldde* L. 7, 9. 7,  
44

*forberna* ‘to burn’  
ind. pres. 3 sg. *f’bernes* Mt. 3, 12  
3rd sg. pret. *f’bernde* Mk. 6, 6

*giorna* ‘to desire’ *p. de, ade, ede.*  
ind. 3rd sg. pret. *giornade* Mk. 10, 46;  
*giornede* Mk. 1, 40; ***giornde*** L. 18, 35;  
*giornde* J. 9, 8;  
3 pl. *giornndon* L. 5, 1;

*wærma* ‘to warm’  
3rd sg. pret. *wærmde* Mk. 14, 54 ;  
*uærmde* J. 18, 18. 18, 25  
3 pl. *uearmndon* J. 18, 18

Cl. 1 cons + son	Total	Number syncopated	Unsyncopated	Epenthesis (with syncope)	Epenthesis (no syncope)	% syncopated
Light stem s	91	63	28	24	1	69

## 2. Class 2 Weak Verbs

### 2.1. Light forms

*bodiga* ‘announce’

3rd sg. pret. *bodade* Mt. I 19,6. 3,1.  
4,23. 9,35. 11,1. Mk. I 1, 9. I 2, 9. 1, 4.  
1, 7. 1, 14. L. I 3, 1. 3, 3. 18. 8. 1. 8,  
39  
3 pl. *bodadon* Mk. 7, 36. 16, 20

*bebodiga* ‘announce’

ind. pret. 3 pl. *bebodadon* L. 12, 48

*forebodiga* ‘announce’

pret. 3 pl. *fēbodadon* Mk. 6, 12

*lufiga* ‘love’

pret. 1 sg. *lufade* J. 13,34. 15,9  
2 sg. *lufades* J. 17. 23. 17, 26  
3 sg. *lufade* Mk. 10,21. L. 7,42. 7,47(2).  
J. 3 16. 11,5. 11,36. 13,1. 13,23. 19,  
26. 20,2. 21,7. 21,20; *lufad* L. 7,47. J.  
15, 12

*gelufiga* ‘love’

pret. 2 sg. *gelufades* J. 17, 23. 17, 24;  
3 sg. *gelufade* Mt. I 6, 13. J. 13, 1. 15,  
9;  
3 pl. *gelufadon* J. 12, 43; *gelufadun* J.  
3, 19;

*gewuniga* ‘dwell’

pret. 3sg. *gewunade* Mt. 4, 13. 27,15.  
L. I, 56. 8,27. 21,37. J. I, 39; *geunade*  
J. 3, 22. 8,9; *geunade* J. 11, 6;  
***gwunede*** J. 1, 32  
3 pl. *gewunadon* J. 1, 39; ***gewunedon***  
Mt. 12, 45  
opt. 3rd sg. pret. *geunade* J. 4,40  
3 pl. *gewunadon* Mt. 11,23;  
*geunadon* J. 19, 31

*eftwuniga*. ‘dwell’

ind. 3rd sg. pret. *eftwunade* L. 1 4,4.

2,43

*ðerhwuniga*

3rd sg. pret. *ðerhwunade* L. 1, 22; 3  
pl. *ðerhwunadun* Mt I 5, 4;  
*ðerhwunadon* L. 22, 28; *ðerhuunadon*  
J. 8, 7

*wuniga*

3rd sg. pret. *wunade* Mt. 21, 17. J. 7,9;  
*uunade* J. 1,14. 4,40. 10, 40; *uunade* J.  
11, 54  
3 pl. *uunadon* J. 2, 12

*bifiga* ‘shake’

ind. pret. 3 pl. ***bifgedon*** Mk. 14, 5

*birliga* (birilian) ‘draw/bear’

ind. pret. 3 pl. *birladon* J. 2, 9

*cliopiga* ‘call’

3rd sg. pret. *cliopade* Mt. 14, 30. 27,  
50. Mk. 9, 26. L. 8, 28. 8, 54. 16, 24.  
18, 38. 18,39. J. 7,37. 12,44; *clioppade*  
L. 23,46; *cliopad* J. 11,43  
3 pl. *cliopadon* Mk. 3, 11. L. I 10. 4. J.  
12,13. 19,6. 19,12. 19,15; *clioppadon*  
Mt 14, 26. Mk. 6, 49. J. 18,40;  
*cliopodan* Mt 27, 23; *cliopadun* Mk.  
11, 9; *clioppado* L. 23,21

*gecliopiga*

ind. 3rd sg. pret. *gecliopade* Mt. 27,46.  
Mk. 9,24. 10, 48. L. 4,33. 9,38;  
3 pl. *gecliopadon* Mt. 11, 16

*dwoliga* ‘err/wander’

pret. 3 pl. *duoladon* Mt. 18,13

*gedwoliga*

ind. 3rd sg. pret. *geduolade* Mt 18, 12



*fulwiga* ‘baptise’

pret. 1 sg. *fulwade* Mk. 1, 8

3 sg. *fuluuade* J. 4, 2

*geasciga* ‘learn’

ind. 3rd sg. pret. *geascade* Mt 2, 4.

Mk. 8, 5. 14,60. 15,2;

pl. *geascadon* Mk. 13,3

*gegiwiga*. ‘ask’

pret. 2 sg. **gegiuuedes** J. 4, 10

3 sg. *gegiuade* L 1,63

2 pl. *gegiuade* J. 16,24

3 pl. *gegiuudon* Mk. 15, 6

*gegladiga*. ‘gladden’

ind. 3rd sg. pret. *gegladade* J. 8, 56

*gehlioniga*. ‘protect’ (*hlēonian*  
‘protect’)

pret 3 sg. *gehlionade* Mt. I 6, 14. Mk.

14, 3. L 7. 36. 11, 37; *gehlinade* L. 22.

14; *gelionade* J. 13, 12. 13, 23. 13. 25;

**gelionede** Mk. 2, 15

3 pl. *gelionodon* Mt. 14,9

ind. pret. 3 pl. *gehoruadon* Mk. 12, 4

*hlioniga*

pret. 3sg. *hlionade* Mt. 26, 20. L. 7, 37

*gelaðiga* ‘invite’

ind. pret. 3 sg *gehlaðade* L. 14.10.

14,12

*gemaciga* ‘make’

3rd sg. pret. *gemacade* L. I 5, 13

*gesceomiga* ‘be ashamed’

pret. 3 pl. *gesceomadon* L. 13, 17. 20,  
13

*getaliga* ‘tell’

ind. 3rd sg. pret. *getalade* L. 11, 38

*getornomiga* ‘to name’

ind. 3rd sg. pret. *getornomade* L. 6, 14

*geðoliga* ‘suffer’ 2

pret. 3sg. *geðolade* Mt 9,20. Mk. 5,26

*ofcliopiga* ‘cry’

ind. 3rd sg. pret. *ofcliopade* Mk. 1,23.  
15,34

*ofercliopiga*

ind. 3rd sg. pret. *of’clioppade* L. 23,  
18

*ongearwiga* ‘prepare’ (Class 2 in  
Wright - §536)

ind. pret. 3 pl. **ongerredon** Mt. 27, 31

*plægiga*<sup>75</sup> ‘to play’ Class 1/2? (traces  
of Class 3)

ind. 3rd sg. pret. **plægede** Mk. 6, 22

2 pl. *plægade* (gie) L. 7, 32

*Syncopated:*

*plægiga* ‘to play’

2 pl. *plægde* (ge) Mt. 11, 17

*sceomiga* ‘be ashamed’

3rd sg. pret. *sceomade* L. 18, 2

*sticiga* ‘stab’

ind pret 3 pl *sticadun* J 19 37

*gecunniga* ‘find out’ (like *sealfian*)

pret. 3 pl. **gecunnedon** Mt. 1 21,9;

**gecunnedun**<sup>76</sup> Mt I 2, 7; *gecunnadun*  
Mt. I 21, 11

*cunniga*

ind. 3rd sg. pret. *cunnade* Mt. 1, 25.

22, 35. L. 10, 25

3 pl. **cunnedon** Mk. 10, 2. J. 8,6

dental:

---

<sup>75</sup> According to Wright (§538) this was originally Class 3 but has moved to Class 2. However, the Class 3 inflexion is preserved in *plaegde*.

<sup>76</sup> Class 2 (Wright & Wright 1925: §536).

*gesmiðiga*. ‘forge, fashion’  
ind. 3rd sg. pret. *gismioðade* J. P 188  
4. (Class 1 in BT, but *-a* in *Li*)

11 in *—e*  
x1 syncopated

167 total

Class 2 forms with a short vowel and obstruent+sonorant cluster

*gegeadriga* pret. ‘connect’  
3 sg. *gegeadrade* Mt. 19, 6; *gegeadrad*  
Mk. 10, 9  
3 pl. **gegeadredon** Mt. 13, 29.  
J. 16, 10

*geadriga* ‘gather’  
pret 1 pl. **geadredon** Mt 13, 28

*ðerhfæstniga* ‘to fasten’  
ind. pret. 3 pl *ðorhfæstnadon* J 19 37

*gedaefna* ‘to become’  
3rd sg. pret. *gedaefnade* J. I 1, 9;  
*gedaefnade* J. 20, 9

*geendebredniga* ‘set out’  
pret, 3 sg. *geendebrednade* Mt. I 3,3  
opt. pret. 3 pl. *geendebrednadon* L. 1,  
1

*micliga* ‘to enlarge’  
3rd sg. pret. *miclade* L. 18, 43

*geopniga* ‘to open’ (*openian* in WS)  
ind. pret. 3 pl. *geopnadon* Mk. 2, 4

*gesetniga* ‘to lie in wait’  
ind. 3rd sg. pret. *gesetnade* Mk. 6, 19

*gesigfæstniga* ‘to triumph’  
ind. pret 3 sg. *gesigfaestnade* Mt I 14.  
12

*gemicliga* ‘to enlarge’  
ind. 3rd sg. pret. *gemiclade* L. 1, 58. 5,  
25. 17, 15

*āwisniga* ‘to dry’  
ind. 3rd sg. pret. *awisnade* L. 8, 6

*geniðriga* ‘to subdue’ (-ode, -ade in  
BT, but one *—ede* here also)  
pret. 3 pl. *geniðradon* Mk. 14,64;  
**geniðredon** Mt.20,18

*geefniga* ‘level’  
ind. 3rd sg. pret. *geefnade* Ml I 21, 17.  
L. I 8, 6. 1 9, 10 Class 1 originally  
(Wright §532)

*efnegefæstniga* ‘fasten’  
ind.pret.3.sg. *efnegefestnade* Mt. I.  
21.7

*genaegliga* ‘fasten with nails’ (Class 1  
or 2? both in bt)  
opt. pret. 3 pl. **genæglede** Mt. 27, 31

*gefæstniga* ‘fasten’  
3rd sg. pret. *gefæstnade* Mt. I 14, 12.  
J. I 4, 13. I 5, 11  
3 pl. *gefæstnadon* Mt. 27, 66;  
*gefeastnadon* Mt. I 22,6

*sægniga* ‘consecrate’  
ind pret 1 pl *sægnade* J. 8.48

## 2.2. heavy stems (Class 2)

*efnegenēhwiga* ‘agree’

ind. 3rd sg. pret. *efnegenehuade* L. 23, 51

3sg. *losade* Mt. 22. 7. L. I 9, 20. 9,42.

11,51. 15,4. 15,6. 17, 27. 19,10

3 pl. *losodun* Mt. 10

opt 3rd sg. pret. *losade* Mk. 9, 22

*belōra* ‘to die’

opt. 3rd sg. pret. *bileorade* Mk. 14, 35

*ge[ondswar]iga* ‘answer’

*Unsyncopated:*

pret. 2 sg. *geondsuaresdes* L. 10, 28

3 sg. *geondsuarede* Mt. 26, 25. Mk.

15,9. L. 7,43. 8,50. 9, 20. 23,9. 24,18.

J. 1,50. 4,13. 8, 54; *geondsuarade* L.

22, 51. J. 3, 10. 5, 19; *geondsuearede*

J. 18, 23; *geondsuearade* J. 2, 19. 5,

11; *geondsuaræde* L. 14, 5;

*geondsuaerade* J. 3,3; *geondsuaR* Mk.

15, 5; *geonsuarede* Mk. 14, 61

3 pl. *geondsuairedon* L. 20, 7;

*geondsuearadun* J. 7, 47

*Syncopated:*

*geondswariga* ind.

pret. 2 sg. *geondsuaerde* Mk. 12, 34;

*geonsuarde* Mt 27, 12

*lȳciga* ‘please’

ind. pret. 3 pl. *lycedon* L. I 5, 1;

*lycoedon* L. 18,9; *lyceton* L. 5, 30

*inlīxiga* ‘shine’

*geeggiga* ‘excite’ (2 in bt)

ind. pret. 3pl *geeggedon* Mk. 15,11

*genacediga* ‘bare’ (Class 1 or 2? 2 in bt)

ind. pret. 3 pl. *genacedon* Mk. 2, 4

*gelo:siga* ‘lose’

3rd sg. pret. *gelosade* Mt. 18, 11. L.

15, 24

*losiga* ‘lose’

pret. 1 sg. *losā(-)* J. 18.9

*gelōra* ‘to pass over, to depart’ (no length in BT.) (Class 1 in BT)

3rd sg. pret. *geliorade* L. I 2, 4;

opt. (ind.?) 3rd sg. pret. *geliorade* Mk. 15, 44;

*ondswariga* ‘to answer’

3 sg. *ondswarede* Mt 28, 5 ;

*ondsuarede* Mt 26, 62 (2 sg.?). 27, 14.

27, 21. L. (10 times). J. (4 times);

*ondsuarade* Mk. 3, 33. L. 5, 31. 13,

14; *ondsuarode* Mt 26, 23. Mk. 13,2;

*ondsuarode* Mt 26, 33; *ondsuaubrede*

L. 14, 3 ; *onsuaerede* Mk.

14, 48; *ondsuaaraide* L. 20,3;

*ondsuearade* J. 6, 26

3 pl. *ondsuareedon* Mt 26, 66. L. 9,

19. 20, 24. 20,39; *ondsuearudon* J. 19,

7

*sceāwiga* ‘to look’

3rd sg. pret. *sceauade* L. 20,23;

*sceaude* Mk. 3,34. 10, 27; *sceode* J.

20, 11

ind. 3rd sg. pret. *inlixade* L. 23, 54

*genēhwiga*. ‘approach’

3rd sg. pret. *genehuade* L. 15, 15 ;

*gehnehuade* Mt. 10, 7

*geendiga* ‘end’

pret. 1 sg. *geendade* J. 17,4

2 sg. *geendades* Mt. 21, 10

3 sg. *geendade* Mt. I 21,5. 7,28. 11,1.

13,53. 19,1. 26, 1(2). Mk. 10, 11.L.

15, 14

3 pl. *geendadon* L.2,39

*geefolsiga* ‘blaspheme’, ind.

3rd sg. pret. *geebolsade* L. 23, 39  
3 pl. *geebolsadon* Mk. 15,29;  
*geebalsadon* Mt 27, 39

*efolsiga* ‘blaspheme’  
3 sg. *efolsade* Mt. 26, 65  
3 pl. *ebolsadon* Mk. 3, 28 *ebalsadon*  
L. 22 .65

*foregeārwigā* ‘honour’  
pret. 3sg. *f’egearuade* L. 12, 47  
3 pl. j (opt?) *f’egearuadon* L. 9, 52

*foregegeārwigā* ind. pret. 3 sg.  
*f’egegearuuade* Mt. 11, 10

*geārwigā*  
pret. 1 sg. *gearuade* Mt 22, 4  
2 sg. *gearuades* L. 2, 31  
3 pl. *gearuadon* J. 19, 42 mg.

*gīwigā* ‘to ask’ (ending –w...)  
3rd sg. pret. *giwude* Mt. 20, 20; ***giuede***  
Mk. 15,43; *giude* Mk. 1 4, 16. L. 23,  
52;  
opt. pret. 1 sg. *giude* L. 19,23  
3 sg. *giuiade* Mt. 14, 7;  
3 pl. *giudon* Mt. 27,20

*geblōedsiga* ‘hallow’  
ind 3rd sg. pret. *gebloedsade* (10  
times); *gebledsade* Mt. 14, 19. Mk. 10,  
16

*geēðmōdiga* ‘humble’  
ind. 3rd sg. pret. *geeðmodade*, Mt. I  
20, 10

*geclānsiga* ‘cleanse’  
ind. 3rd sg. pret. *geclānsade* L. I 9, 8.  
7, 44 ; *geclaensade* Mt. I 17,20

*cumpiga* ‘contend’ \*MS compadi alt.  
to cumpadi  
opt. pret. 3 pl. *cumpadi* J. 18, 36

*edwītiga* ‘reproach’ (BT unclear  
whether long or short)

ind.pret.3.pl. *eðwītadon* L. 20.17

*fearriga* ‘depart’  
pret. 3sg. *fearrade* L. 1,38  
3 pl. *fearradon* L. 2. 15  
opt. 3rd sg. pret. *fearrade* L. 4, 42

*foregemerciga* ‘mark out’  
3rd sg. pret. *f’egemercade* Mt. I 17,14

*efnegeðonciga* ‘to congratulate’  
ind. pret. 3 pl. *efnegeðoncadon* L. 1,  
58

*forðlōciga* ‘to look forth’  
3<sup>rd</sup> sg.pret.ind. *locade f’ð* J 20 11

*upplōciga* ‘look up’  
ind. 3rd sg. pret. *upplocade* Mk. 8, 24

*lōciga* ‘look’  
3rd sg. pret. *locade* Mt. 14. 19. 19, 26.  
Mk. 6, 41  
3 pl. *locadon* Mt. 21, 38

*eflōciga* ‘look again’  
3rd sg. pret. *eftlocade* L. 1, 48. 9, 16.  
J. 1, 36  
3 pl. *eftlocadon* Mk. 16, 4

*āhongiga* ‘hang’  
ind.pret. 3 pl. *ahongadon* L. 23, 39

*berēafiga* ‘spoil’  
ind. pret. 3 pl. *bereofadon* L. 10, 30

*bloēdsiga* ‘hallow’  
3rd sg. pret. *bloedsade* Mk. 14, 22  
1 pl. *bloedsade* J. 8, 48

*cēapiga* ‘bargain’  
opt. pret. 3 pl. *ceapadon* J. 4, 8

*gefrāsiga* ‘ask’  
ind. 3rd sg. pret. *gefrasade* Mt. 2,4.  
16,13

*gefrīga* ‘to embrace’

3rd sg. pret. *gefrigade* Mk. 10, 16

*gefulwiga* ‘baptize’

3rd sg. pret. *gefulguade* J. 3, 22;

*gefulwade* Mk. 1, 4

*gefiaga*. ind. ‘to hate’

pret. 3 pl. *gefiadon* L. 19, 14. J. 15, 24

*gegearwiga* ‘prepare’

pret. 2 sg. *gegearuades* L. 12, 20

3 pl. *gegearuadon* Mt. 26, 19. L. 22,

13. 23, 56. 24, 1; *gegearwadon* Mk.

14, 16. 15, 17. 15, 20; *gegeredon* Mt.

27, 31

*gegræppiga* ‘sieze’ (BT has *–ade* as

the ending for *grappian*, but for

*gripan* (also weak) the ending is *–de*,

meaning *gripan* is Class 1 – potential  
source of confusion)

3rd sg. pret. *gegræppde* Mt. 14, 31

*gehālgiga* ‘hallow’

3rd sg. pret. *gehalgade* J. 10, 36

opt. pret. 3 pl. *gehalgodon* J. 11, 55

*gehāmiga*. ‘establish in a home’

ind. 3rd sg. pret. *gihamadi* J. P 188.7

*gelēswiga* ‘to feed’ (not long in BT)

ind. pret. 3 pl. *gelesuadon* L. 8, 34

opt. 3rd sg. pret. *gelesuade* L. 15, 15

*gelīciga* ‘to please’

ind. 3rd sg. pret. *gelicade* Mt. I 22, 5.

17, 5. Mk. 6, 22(2). L. 10, 21; *gelicade*

Mt. 14, 6

*gemerciga* ‘to mark out’

ind. 3rd sg. pret. *gemercade* Mt. I 9, 3.

Mk. I 1, 18. L. I 2, 7. J. 3, 33. 6, 27

3 pl. *gemercadon* Mt. I 22. 7. 27, 66

*gemilciga* ‘to give milk’

ind. pret. 3 pl. *gemilcadon* L. 23, 29

*gemilsiga* ‘to show mercy’

ind. 3rd sg. pret. *gemilsade* Mt. 9, 36.

18, 27

*gemyndgiga* ‘to remember’ (Wight

§536)

ind. 3rd sg. pret. *gemyndgade* Mt. I 19,

6. L. I 7, 8

*gerēafiga* ‘to steal’

ind. pret. 3 pl. *gehreafadon* Mk. 15, 20

*gespelliga* ‘to speak’

ind. pret. 3 pl. *gespelledon* L. 24, 15

*gesynnigiga* ‘to act wrongly’

3rd sg. pret. *gesynnigade* Mt. 5, 28

*getwīga* ‘to doubt’ (in BT this is Class

1, with *tweode* as past)

ind. pret. 3 pl. *getwiedon* Mt. 28, 17

*geðrōwiga* ‘to suffer’ (not long in BT)

3rd sg. pret. (opt?) *geðrowade* L.

24, 46

*geunrōtsiga* ‘to offend’

ind. 3rd sg. pret. *giunrotsade* J. 21, 17

*gewītiga* ‘to prophesy’ (*gewītegian*)

3rd sg. pret. *gewitgade* Mt. 15, 7. Mk.

7, 6. L. 1, 67. J. 16, 11; *geuitgade* J. I 2,

1. 11, 51

1 pl. *gewitgedon* Mt. 7, 22

3 pl. *gewitgedon* Mt. 11, 13

*hēafīga* ‘to lament’

ind. pret. 2 pl. *heafegde* Mt. 11, 17

\*syncope

*licciga* ‘to lick’ (ode in BT, but *–ede*

in Li)

ind. pret. 3 pl. *liccedon* L. 16, 21

*līciga* ‘to please’

3rd sg. pret. *licade* Mt. 12, 18.

Mk. 1, 11

*mērsiga* ‘to glorify’  
opt. pret. 3 pl. *mersades*  
Mk. 3, 12

*milsiga* ‘show mercy’  
pret. 2 sg. *milsades* Mt. 18,33

*oferglōesiga*. ‘to gloss’  
ind. 3rd sg. pret. *of’glōesade* J. P  
188.7

*oferscȳiga* ‘to overshadow’  
ind. 3rd sg. pret. *of’scyade* Mt. 17, 5

*offearriga* ‘to depart’ (length depends  
on geminates)  
ind. 3rd sg. pret. *offearrade* L. 5, 13.

*ofgemerciga* ‘to mark out’  
ind. 3rd sg. pret. *ofgemercade* L. 10, 1;  
*ofgemærcade* L. I 6, 14

*rīxiga* ‘to rule’  
3rd sg. pret. *rixade* Mt. 2, 22

*sēofiga* ‘to lament’  
ind. 3rd sg. pret. *seofade* Mk. 8, 12

*sibbiga* ‘to make people friends’  
(length depending on gem)  
ind. 3rd sg. pret. *sipbade* L. I 11, 2

*somniga* ‘to assemble’  
1 pl. *somnadon* Mt. 13,28. 25, 38  
3 pl. *somnadon* Mt. 25, 35

*synngiga* ‘to sin’  
pret. 1 sg. *synngade* L. 15, 18. 15, 21  
3 sg. *synngade* Mt. 27, 4. J. 9,2. 9,3  
opt. 3rd sg. pret. *syngade* J. I 5, 10

*ðerhclānsiga* ‘clean’  
pret 3 sg *ðerhclaensade* Mt. 3.12

*ðonciga* ‘to thank’  
ind. 3rd sg. pret. *ðoncade* Mt. 26, 27

*unrōtsiga* ‘to be sad’  
ind. 3rd sg. pret. *unrotsade* Mk. 3,5;  
*unrodsade* Mk. 6,26

*welgelīciga* ‘to please’  
3rd sg. pret. *woel gelicade* Mt. 3, 17;  
*gelicade woel* L. 12, 32

*behōfiga* ‘need’  
pret. 3 pl. *behofadon* L. 6, 11

*ymlōciga* ‘to look round’  
ind. 3rd sg. pret. *yml blockade* Mk. 3, 34.  
10, 23  
3 pl. *yml blockadon* Mk. 9, 8. J. 13, 22

*ymbscēawiga* ‘to look’ (Class 2 in  
Wright §536)  
ind. 3rd sg. pret. *ymb sceawade* Mk. 5,  
32; *ymb sceuade* Mk. 8, 24;  
*ymb sceawde* Mk. 3, 5; *ymsceawde*  
Mk. 11, 11; *ymb sceauade* J. 1,42

*geðrēaga* ‘to rebuke’ (Class 2,  
originally belonged to Class 3 – wright  
§537)  
3rd sg. pret. *geðreade* L. 1 10, 11.  
4,35. 4,41. 8,24. 9,21. 9,42. 9, 55. 23,  
40; *geðreate* Mt. 17, 18. Mk. 6,45  
3 pl. *geðreadon* L. 18, 15. 18, 39

*trūgia* ‘to confide’  
ind. 3rd sg. pret. *trugude* J. 2, 24

Class 2	Total number	Number syncopated	Number in - e	Percentage syncopated
Light roots	167	1	11	0.59
Heavy roots	261	14	56	5.6

Heavy Class 2 forms ending t/d	Total	Number syncopated	In -e	% syncopated
	61	3	0	4.9

### 2.3. Class 2 son+son clusters

*geleorniga* ‘to learn’

3rd sg. pret. *geliornade* J. 6, 45. 7, 15

2 pl. *geleornadon* L. 6, 3

*firiniga* ‘sin’ (Class 1 converted to Class 2)

ind. 3rd sg. pret. *firinade* Mt. 27, 4

*geearniga* ‘earn’

ind. 3rd sg. pret. *geearnade* Mt I 6, 15

3 pl. *geearnadon* L. I 9,3.

*gewillniga* ‘desire’

ind. pret. 3 pl. *gewillnadon* Mt. 13, 17

*willniga* ‘desire’

3rd sg. pret. *wilnade* Mk. 6, 25. L. 15,

16. 16, 21. 22, 15; *willnade* L. 23, 20;

3 pl. *wilnadon* J. 7, 44

*earniga* ‘to earn’

ind.pret.3 sg. *earnade* Mk. I. 2.1

*geondspurniga* ‘to tempt’

pret. 3 pl. *geondspurnedon* Mt. 13, 57

*gesomniga* ‘to assemble’

3rd sg. pret. *gesomnade* Mt. 2,4. 21,33

2 pl. *gesomnade* Mt. 25, 43

3 pl. *gesomnadon* Mt. 22, 10. 22,34.

27,27. 27,62. Mk. 1, 45. 10,1. J. 6,13.

11,47. 18,20; *gesomnadun* Mt. 27, 17

opt. 3rd sg. pret. *gesomnade* J. 11, 52

*leorniga* ‘to learn’

pret. 2 pl. *leornadon* Mt. 19, 4;

*liornadon* Mt. 21,16; *leornade* Mt.

12,3. 12,5. 22,31. Mk. 2,25; *leornadæ*

Mk. 12, 26; *leornada* Mk. 12, 10;

*leornade* Mt. 21, 42

x38 total

### 2.4. Heavy forms (Class 2) ending in an obstruent+sonorant cluster

*gebāsniga* ‘expect’

ind. 3rd sg. pret. *gebasnade* L. 23, 51

*geberhtniga* ‘glorify’

1 sg. *geberhtnā* J. 17, 4

3 sg. *geberhtnade* J. 13,32(2);

*geberhtade* J. 16, 14; *gebrehade* J. 1

6, 18

*gedruncniga* ‘drown’

ind. pret. 3 pl. *gedruncnadon* L. 5, 7

*gelytliga* ‘to diminish’

ind. 3rd sg. pret. *gelytlade* J. I 1, 9

*berhtniga* ‘glorify’

pret. 1 sg. *berhtnade* J. 12, 28

*āwundriga* ‘wonder’

ind. pret. 3 pl. *awundradon* L. 1, 21, 4, 22, 5, 26, 8, 25, 20, 26

*gewuldriga* ‘to glorify’

ind. 3rd sg. pret. *gewuldrade* L. 23, 47; *gewul’* L. 13, 13

3 pl. *geuuldradon* Mt. 9, 8

*wordīga* ‘to value’

3rd sg. pret. *wordāde* Mt. 8, 2, 20, 20.

Mk. 5, 6; *uorōade* J. 9, 38

3 pl. *wordadon* Ml 15, 31, 28, 9;

*wordadun* Mi 28, 17; ***wordēdun*** Mk. 2, 12

*wuldriga*.

pret. 1 sg. *wuldrade* J. 17, 4

*wundriga* ‘to make wonderful’

3rd sg. pret. *wundrade* Mt. 27, 14, L. 18, 43, 24, 12

3 pl. *wundradon* Mt. 15, 31, Mk. I 3, 8, 12, 17, L. 7, 16, 8, 56, J. 7, 15;

*wundradun* Mt. I 19, 13, 15, 31

*gewundriga*

3rd sg. pret. *gewundrade* Mt. 8, 27.

Mk 11, 18, 15, 44; *geuundrade* Mt. 8, 10

3 pl. *gewundradon* Mt. 13, 54, 19, 25, 22, 33, Mk. 5, 20, 10, 26, L. 1, 63.

9, 43; *geuundradon* Mt. 22, 22, J. 4, 27; *geundradon* Mt. 15, 31

x75 total

## 2.5. Class 2 heavy forms ending in a dental

*geembehtiga* ‘minister’

3rd sg. pret. *geembehtade* Mk. 1, 31

3 pl. *geembehtadon* Mt. 4, 11, Mk.

15, 41; *geembihtatun* Mt I 5, 3

*ofwundriga* ‘to make wonderful’

ind. pret. 3 pl. ***ofwundredon*** Mk. 2, 12

*tōgewundriga*

ind. pret. 3 pl. *togewundradun* Mk. 7, 37

*lēcniga* ‘to cure’

3rd sg. pret. *lecnade* Mk. 1, 34, L.

4, 40, 7, 21; *leicnade* Mt. 12, 15

*sundriga* ‘to separate, sunder’

ind. pret. 1 sg. *sundrade* Mt. I 1, 3

*foregebēcniga* ‘fortell’

3rd sg. pret. *foregebecnade* Mt. I 7, 14

*gebēcniga* ‘point out’

2 sg. *gebecnades* Mt. 1 4, 10

3 sg. *gebecnade* J. I 7, 3 ; *gebēcnade* J. 13, 24

3 pl. *gebecnadon* L. 1, 62

*bēcniga* ‘to make signs’

3rd sg. pret. *becnade* L. I 7, 11, 8, 47.

J. 12, 33, 18, 32, 21, 19;

3 pl. *becnadon* L. 5, 7

*gehērcniga* (not long in BT, but still consonant cluster) ‘hear’

ind. pret. 3 pl. *gehercnadon* Mt. 22, 22

*gelēcniga* ‘to cure’

ind. 3rd sg. pret. *gelecnade* Mt. I 18,

12, 14, 14, 15, 30; *geleicnade* Mt. 12, 22

opt. pret. 3 pl. *gelecnades* L. 9, 1

opt. 3rd sg. pret. *geembehtade* Mk. 10, 45

*hondbæftiga* ‘lament’



ind. pret 1 pl- *hondbeafton* L. 7, 32  
3 pl. *hondbæftadon* L. 23, 27

*gebīotiga* ‘threaten’  
ind. 3rd sg. pret. *gebiotate* J. I 7, 19

*gecostiga* ‘tempt’  
ind. pret. 2 pl. *gecostadon* Mk. 10, 2  
opt. 3rd sg. pret. *gecostade* J. 0, 6

*costiga*  
pret. 3 pl. *costadon* L. 11, 16

*dēadiga* ‘die’  
3rd sg. pret. *deadade* Mt 2, 19 . L. 8, 42

*forhtiga* ‘be afraid’  
ind. 3rd sg. pret. *forhtade* Mk. 5, 33

*dihtiga* ‘dictate’  
ind.pret.3 sg *dihtade* L. I 2,6

*ellðōdiga* ‘live abroad’  
ind. 3rd sg. pret. *ellðiodegde* Mt. 21, 33, *ellðiodade* Mk. 13, 34; *ellðeodigde* L. 15, 13

*embehtiga* ‘minister’  
pret. 3sg. *embihtade* L. 1 5, 15. 4,39. J. 12,2  
1 pl. *embigto* Mt. 25, 44 (\**embigtade*)  
3 pl. *embehtadon* L. 8, 3

*gefyrhtiga* ‘frighten’  
ind. pret. 3 pl. *gefyrhtadon* L. 24,22;

*geœfistiga* ‘to hurry’  
ind. 3rd sg. pret. *geœfistade* Mt. I 7, 15

*geriordiga* ‘to take food’  
ind. 3rd sg. pret. *gehriordade* L. 16, 19. 22, 20; *geriordade* Mk. I 4, 6  
3 pl. *gihriordadon* J. 21, 1.5  
opt. 3rd sg. pret. *gehriordade* L. 11,37

*gesceortiga* ‘to fall short’

ind. 3rd sg. pret. *gesceortade* J. 2, 3

*gesōðfæstiga* ‘to justify’  
ind. pret. 3 pl. *gesoðfæstadon* L. 7, 29

*getrahtiga* ‘to treat’  
ind. 3rd sg. pret. *getrahtade* Mt. I 19,9. L. I 3, 2  
2 pl. *getrahtade* Mk. 9, 33  
3 pl. *getrahtadon* Mk. I 4, 8

*instihtiga* ‘to arrange’  
ind. 3rd sg. pret. *instihtade* L I 2, 6

*lattiga* ‘to linger’ (*latian*) (short depending on gem)  
ind. 3rd sg. pret. *hlattade* L. 1,21

*geworðiga* ‘to value’  
3rd sg. pret. *geworðade* Mt. 15, 25. L. 13, 13; *gewordade* Mt. 9, 18  
2 pl. *geuorðadon* J. 4, 21  
3 pl. *geworðadon* Mt. 14,33. Mk. 15, 19. L. 24, 52; *geworðadum* Mt. 2, 11. J. 4, 20; *geuorðadun* J. 4, 23  
opt. pret. *geuorðadun* 4.23  
opt. pret 3 pl. *geuorðadon* J 12 20

*gewundiga* ‘to wound’  
ind. pret. 3pl. *geuundadon* Mk. 12,4. L. 20,12

*oefistiga* ‘to hurry’  
ind. 3rd sg. pret. *oefistade* L. 19, 6

*ofblindiga* ‘to blind’  
ind. 3rd sg. pret. of *blindade* J. 12, 40

*plontiga* ‘to plant’  
3rd sg. pret. *plontade* Mt. 15, 13

*riordiga* ‘to speak’  
ind. 3rd sg. pret. *riordade* J. 4, 27  
ind. pret. 1 pl. *hriordadun* Mt. 25, 37

*sōðiga* ‘to prove true’  
3rd sg. pret. *soðade* J. I 5, 2  
3 pl. *soðadon* J. I 7, 2

*trahtiga* ‘to explain’  
ind. 3rd sg. pret. *trahtade* Mk. 4, 34

*onstīdīga* ‘wither’  
ind pret 3 sg *ōnstiđade* J. 12 40

*unworđiga* ‘to devalue’  
ind. pret. 2 pl. *unuorđade* J. 8, 49

Total cons+son Class 2	Total	Number syncopated	In -e	% syncopated
	144	0	2	0

Heavy Class 2 forms ending with a dental	Total	Number syncopated	In -e	% syncopated
	61	3	0	4.9



## Appendix C

### The past participle

#### C1 The past participle in Early West Saxon

##### (C1.1) Weak **-ed** past participles

###### (C1.1.1) *Uninflected Short syllables (Class 1) (Cosijn 1888: §117)*

###### (a) excl. *t/d*-final

*onerian* ‘to plough up’  
*onered CP (H)* 411.18

*fremman* ‘to perform’  
*(ful-, ge)fremed CP (H)* 445.21.23,  
463.25, *Or.* 130.27

*herian* ‘to praise’  
*hered CP (H)* 451.19

*gremian* ‘to provoke’  
*gegremed CP (C)* 220.15

*nerian* ‘save’  
*genered CP (H, C)* 167.17, *Or.* 176.19

*trymman* ‘to make firm’  
*getrymed CP (H, C)* 83.10, 161.25.25,  
165.7, *Or.* 160.28

*on-, astyrian* ‘to stir’  
*on-, astyred CP (H, C)* 159.7, 215.10  
*Or.* 166.12. (*astyred CP* x4, *onstyred CP* x5)

*aðenian* ‘to stretch out’  
*aðened CP (H, C)* 85.25, 87.15, 97.23  
(+ 4 more)

*werian* ‘to hinder’  
*gewered CP (H, C)* 279.15

*a-, underwreðian* ‘to support’  
*a-, underwreðed CP (H, C)* 113.11,  
125.25, 141.18

---

Uninflected light forms  
(excl. *t/d*-final) total:  
x36 (0% syncopated)

---

###### (b) *t/d* forms

*oftreddan* ‘to tread to death’  
*oftredd Or.* 260.18

*gelettan* ‘to hinder’  
*gelett CP (H)* 257.19, 257.1 (*gelet C*)

*ahwettan* ‘to whet’  
*ahwet Or.* 280.14

*settan* ‘to set’

*a-*, *be-*, *gesett CP (H, C) 77.13, CP (C) 78.10, CP (H, C) 119.22, 127.17, 195.19, CP (C) 220.4, 222.10, CP (H,*

*C) 319.21, CP (C) 338.14, Or. 52.3, 202.27, 264.20*  
*asset CP (H) 79.10, 339.14*  
*geset Or. 86.32, 274.24*

---

Uninflected light *t/d* forms total:  
x20 (100% syncopated)

Geminate status:

*tt* x14

*d* x1

*t* x 5

---

### (C1.1.2) Uninflected Long syllables (Class 1) (Cosijn 1888: §121)

(a) excl. *t/d-final*

*untyd* ‘ignorant’ *CP (H, C) 371.6*

*(upp)aræred CP (H, C) 107.23, 169.5*

*cirran* ‘to turn’

*ge-*, *beci(e)rred*, *-cerred*, *cyrred CP (H, C) 27.2, 31.21.22, 57.10, 99.19, 251.10, 269.2, (H) 411.2, Or. 138.25, 148.17*

*bescīeran* ‘deprived’

*besciered Chron. 821*

*gesci(e)red* ‘digestus’ *CP (H, C) 295.7*

*asyndran* ‘to put asunder’

*asyndred CP (H) 269.14*

*stieran* ‘to steer’

*gestiered CP (H, C) 71.16, 117.20, 205.22, 269.20, 341.11, Or. 288.24, 218.4*

*afrēfran* ‘comfort’

*afref(r)ed CP (H) 395.22*

*asyndran* ‘to put asunder’

*asyndred CP (H, C) 81.20.21*

*gehī(e)ran* ‘to hear’

*gehi(e)red CP (H, C) 81.17, 93.7.9, 147.15*

*atiefran* ‘to paint’

*ati(e)fred CP (C) 152.23, (H, C) 157.4.10, 161.21*

*læran* ‘to teach’

*(un)gelæred CP (H, C) 59.1, 217.3, 279.22 etc. (gelæred x3 Or, +2 CP, x1 Chron)*

*atæfred CP (H) 467.19*

*timbran* ‘to build’

*getimbred Or. 1.7, 42.25, 78.1*

*amierran* ‘to hinder’

*amierred CP (H, C) 243.5, (H) 415.36*

*cwielman* ‘to torment’

*cwielmed CP (H) 309.7*

*(upp)aræran* ‘to raise up’

*dēman* ‘to judge’  
*ge-*, *fordemed CP (H, C)* 185.11,  
377.16, *(H)* 399.32

*flieman* ‘to put to flight’  
*a-*, *gefliemed Or.* 1.26, 78.29, 92.13  
*etc. etc.*, *Chron.* 836,  
*geflemed Or.* 172.33

*i(e)rman* ‘to make miserable’  
*gei(e)rmed CP (H, C)* 189.16

*gesēman* ‘to compose’  
*gesemed Or.* 52.25, 70.6

*gewemman* ‘to defile’  
*gewemmed (CP (H))* 423.24 *gewemed*  
*CP (H, C)* 113.20, 133.22, 313.25, *(H)*  
405.6

*for- onbærnan* ‘to set alight’  
*for-*, *onbærned CP (H, C)* 5.9, 165.3,  
293.14 *etc. Chron.* 687

*acennan* ‘to bring forth’  
*acenned CP (H, C)* 107.19, *(C)*  
312.20, *Chron. I*  
*akenned CP (H)* 313.20

*hīenan* ‘to humble’  
*gehi(e)ned CP (H, C)* 67.19, 165.7,  
299.14 *(H)* 391.7  
*forhiened Or.* 118.22.26 *Or.* 252.24  
*gehened CP (H)* 465.29, 53.18

*(ge)lāenan* ‘to lend’  
*gelæned CP (H)* 387.12, 389.6.30

*(ge)nemnan* ‘to name’  
*genemned CP (H, C)* 7.19, 75.7, *(H)*  
385.31, *Chron.* 449, 477, 552, *nemned*  
*Chron.* 477, 508, 794

*be-*, *ontȳnan* ‘to open’  
*be-*, *ontȳned CP (H, C)* 157.15.22,  
277.22, *Or.* 250.21

*geðwāenan* ‘to moisten’

*geðwāened CP (H, C)* 373.10, *(H)*  
413.12

*færwiernan* ‘to hinder’  
*færwirned CP (H)* 387.8

*onāelan* ‘to kindle’  
*onæled CP (H, C)* 159.8, 163.20.  
165.6 *etc. (9H, 7C)*

*be-*, *todælan* ‘to deal’  
*be-*, *todæled CP (H, C)* 37.9, 67.10  
*etc. (9HC)*

*bedieglan* ‘to conceal’  
*bediegled CP (H)* 303.15

*(a-, ge-)fyllan* ‘to fill’  
*(a-, ge-)fyllled CP (H, C)* 23.6, 43.21,  
111.3 *etc. (10H, 8C, 3Or)*

*gefylled Or.* 174.15,

*agāelan* ‘to hinder’  
*agæled Or.* 134.20

*gehāelan* ‘to heal’  
*gehæled CP (H, C)* 267.10.11, 275.6,  
*(H)* 397.30, *Or.* 136.1

*gehwelan* ‘to bellow’  
*gehweled bið CP (H, C)* 273.22

*oferstælan* ‘to confute’  
*oferstæled CP (H, C)* 47.16

*gestillan* ‘to rest’  
*gestilled CP (H, C)* 227.15, *Or.* 106.5,  
260.5

*tāelan* ‘to blame’  
*getæld CP (H, C)* 337.23, *getæled CP*  
*(H, C)* 339.1, *(H)* 439.27

*gebīgan* ‘to bow’  
*gebi(e)ged CP (H)* 29.10, 67.18,  
133.2, 245.13, 439.17

*gebigged CP (C)* 28.10, 66.18, 132.2, 244.13

*gebrēgan* ‘to frighten’  
*gebreged CP (H)* 443.22

*bebyrgan* ‘to bury’  
*bebyrged Or.* 3.6

*cīegan* ‘to call’  
*gecigged, gecieged CP (H, C)* 379.19

*gefēgan* ‘to unite’  
*gefeged CP (H, C)* 99.25, 253.19, 361.18

*glengan* ‘to lengthen’  
*geglenged CP (H, C)* 337.25

*ymbhringan* ‘to ring around’  
*ymbhringed CP (H, C)* 111.8

*gemengan* ‘to mingle’  
*gemenged CP (H, C)* 115.1, 289.19, 321.23, 323.16

*tīegan* ‘to tie’  
*geti(e)ged CP (H, C)* 111.19, (H) 31.18, *getigged CP (C)* 30.18

*awiergan* ‘to corrupt’  
*awierged CP (H, C)* 343.3, 377.16, *CP (H)* 377.25  
*awyrged CP (C)* 376.25

*awiergan*  
*awierged CP (H, C)* 331.19, *Or.* 294.11

*adræfen, adræfed Or.* 150.23

*(ge)drefan, un-, gedrefed CP (H, C)* 31.7, 105.21, 165.21, 231.23, 251.12  
*etc. (+5 CP, +1 Or.).*

*be-, gehwierfan* ‘to change’  
*be-, ge-, hwi(e)rfed CP (H, C)* 167.13, 185.6, (C) 182.10, 222.3 *etc. (+1 Or.,*

*+2 CP) Chron.* 34 *gehweorfed CP (H)* 183.10

*læfan* ‘to leave’  
*læfed Or.* 88.6

*alīefan* ‘to permit’  
*aliefed Or.* 4.34, 202.20 *etc. (+1 CP)*

*bewæfan* ‘to cover’  
*bewæfed CP (H, C)* 83.8

*cy:ðan* ‘to make known’  
*gecyðed CP (H, C)* 211.14, *CP (H)* 409.3, *Or.* 100.8

*oferswīðan* ‘to overcome’  
*oferswiðed CP (H, C)* 123.4, 135.23, 227.2 *etc. (+3 CP) Or.* 112.23

*alīesan* ‘to redeem’  
*aliesed Or.* 62.5

*(ā)tāsan* ‘to tear’  
*a-, getæsed CP (H, C)* 297.18

*frætwan* ‘to adorn’  
*gefrætwed Or.* 252.27

*gierwan* ‘to prepare’  
*gegiered CP (H)* 469.8, *Or.* 70.34

*nierwan* ‘to constrain’  
*genierwed CP (H, C)* 231.21, (C) 304.17

*besirwan* ‘to plan’  
*besi(e)red Or.* 140.22, 166.3, *gesired CP (H)* 435.16

*ascirpan* ‘sharpen’  
*ascirped CP (H, C)* 69.13

*yppan* ‘to bring forth’  
*geypped Or.* 108.31

*(ofer)-drencan* ‘to over drench’

*ge-*, *oferdrenced CP (H, C)* 373.11,  
381.7, *(H)* 431.20,

*(ge)īecan* ‘to increase’  
*gei(e)ced CP (H, C)* 315.16, 361.12,  
373.12, 381.2, *Or.* 116.11

*besencan* ‘to sink’  
*besenced CP (H, C)* 135.24

*sticcan* ‘to stick’  
*gesticced* ‘transfixed’ *CP (H, C)* 217.6

*swencan* ‘to trouble’  
*geswenced CP (C)* 62.21, *CP (H, C)*  
87.24, 107.3, 127.24, 315.6, 377.8

*ðryccan* ‘to press’  
*geðryced CP (C)* 268.9

*ðryscan* ‘to press’  
*geðrysced CP (H, C)* 165.19, *(H)*  
269.9

*onwācan* ‘to weaken’  
*onwæced CP (H, C)* 83.20

*oferwlencan*  
*oferwlenced* ‘opulent’ *Or.* 44.12

---

Uninflected heavy forms (excl.  
*t/d* forms)  
Total: x258  
x1 syncopated (but *sellan* type)

---

### *(b) t/d- final forms*

#### *(b<sup>1</sup>) V:+t/d forms*

*bædan* ‘to constrain’  
*gebædd CP (H, C)* 251.13

*tobrædan* ‘to broaden’  
*tobrædd CP (H, C)* 171.4, *tobræd Or.*  
188.12

*cīdan* ‘to chide’  
*gecid(d) CP (H, C)* 123.9 (*gecid* in  
corpus)

*afēdan* ‘to feed’  
*afedd CP (H, C)* 55.5, *(C)* 380.7, *afed*  
*CP (H)* 381.7

*hȳdan* ‘to hide’

*gehyd CP (H, C)* 197.12, *Or.* 288.32,  
*gehyded CP (H, C)* 55.23

*lædan* ‘to lead’  
*(ge, -for)læd CP (H)* 465.7, 467.21,  
441.27  
*a-*, *keled CP (H, C)* 57.9 (according to  
B&T, this use of *k* is in place of *g*) *ær*  
*wæs keled of his gewunan*  
*gelædd Or.* 230.3, 266.11, 286.18  
*ge- forðlæded CP (H, C)* 99.7 *Or.*  
290.10

*geēaðme:dan* ‘to humiliate’  
*geeaðmeded CP (C)* 34.6, *-med CP*  
*(H, C)* 299.12, *-medd CP (H)* 35.6



*gen(i)edan* ‘to take’  
*geni(e)ded CP (H, C)* 39.10, *gen(i)ed CP (H, C)* 81.5, *(H)* 467.20

*underðīedan* ‘to subject’  
*underði(e)ded CP (H, C)* 35.10, 47.15, 73.16, *(C)* 112.19, *Or.* 44.5, 60.8, 106.23, 112.11, *underði(e)dd CP (H, C)* 51.13, *Or.* 48.32, *a-*, *underðied CP (H)* 113.19, 305.9, *CP (H, C)* 349.6, *Or.* 112.20

*(ge)bētan* ‘to improve’

---

Uninflected V:+t/d forms:  
 Total: x47  
 Syncope: 35 (12 unsync):

Breakdown:  
*ded* x12  
*d* x23  
*dd* x12

---

*ungebett CP (C)* 210.7 -bet H

*onhāetan* ‘to inflame, heat’  
*onhæt CP (H)* 411.7 *Or.* 54.28

*gemētan* ‘to measure’  
*gemet CP (H)* 385.25

*nāetan* ‘to subdue’  
*genæt CP (H)* 111.6 *CP (H, C)* 189.16  
*genætt CP (C)* 110.6

*unre:tan* ‘to sadden’  
*geunret Or.* 140.6

## *(b<sup>2</sup>) VC+t/d forms*

*gebendan* ‘to bend’  
*gebend Or.* 220.1

*ablendan* ‘to blind’  
*ablend CP (H, C)* 69.16, 241.3

*onbryrdan* ‘to violate’  
*onbryrd CP (H, C)* 169.10, *(H)* 423.22

*begyrdan* ‘to surround’  
*begyrded CP (H, C)* 47.11, *begyrdd CP (H)* 171.5, *begyrd CP (C)* 170.5

*gepyndan* ‘to pound’  
*gepynd CP (H, C)* 277.6

*(ge)scildan* ‘to shield’  
*gesci(e)lded CP (H, C)* 141.7, *gescild Or.* 76.1, 100.23

*gesc(i)endan* ‘to shame’

*gesc(i)ended CP (H, C)* 27.11, 95.21, 101.4, 165.5, 181.10, 183.14, *(H)* 63.21, *(C)* 244.24, *gescend Or.* 82.6

*(on)sendan* ‘to send’  
*(on)sended CP (H)* 429.15, 441.30, *Or.* 200.28, 234.15, *Chron.* 430, *(a)send CP (H, C)* 213.18

*a-*, *on-*, *gewendan* ‘to turn’  
*on-*, *gewend CP (H, C)* 181.11, 267.6, *(H)* 405.26.35, *awended CP (H, C)* 35.13

*gewi(e)rdan* ‘to corrupt’  
*gewi(e)rd CP (H, C)* 69.3

*andwyrdan* ‘to answer’  
*geandwyrd CP (H)* 443.23

*fæstan* ‘to make firm’

*befæst* CP (C) 192.7, 320.14, CP (H) 419.9  
*gemetfæst* CP (C) 88.5  
 -sTH CP (H) 89.5, 193.7, 321.14

*gehæftan* ‘to take captive’  
*gehæfted* CP (H, C) 85.8  
*gehæft* ‘captive’ CP (H, C) 193.5, CP (H) 415.17.25, 465.5.6  
*gihaft* cf. *gehæfTH* CP (C) 126.14 (-ft H)

*amæstan* ‘to fatten’  
*amæst* CP (H, C) 381.3

*anmēttan* ‘to encourage’  
*geanmet* Or. 152.4

*geryhtan* ‘to set right’  
*geryht* CP (H, C) 279.22

*atyhtan* ‘to extend’  
*atyht* CP (H, C) 301.19, 293.13

*awēstan* ‘to lay waste’  
*awest* Or. 72.25, 94.20, 128.27.29.30 268.6  
*awested* Or. 64.21

---

Uninflected VC+t/d forms:

Total: x56

Syncope: 38

Breakdown:

*ded* x 18

*d* x 37

*dd* x 1

---

### (C1.1.3) Inflected short -ed forms (Class 1)

#### (a) Strong adjectival inflexions (excl. *t/d* forms)

*gen.sg.neut.*  
*fulfremedes* ‘fulfilled’ CP (H, C) 65.15

*gen/dat.sg.fem.*  
*ful(l)fremedre* CP (H) 385.18, 413.7

*acc.sg.masc.*  
*ful(l)fremedne* CP (H, C) 73.7

*nom.pl.masc.*  
*gecnysede* ‘beaten’ Or. 142.6

*ful(l)fremede* CP (H, C) 177.14, (H) 467.12,  
*a-, onstyrede* ‘stirred’ CP (H, C) 213.16.23, (H) 423.9, 451.30, 461.29,  
*getrymede* ‘strengthened’ CP (H, C) 85.20,  
*aðenede* ‘extended’ CP (H, C) 175.7

*nom.pl.fem.*  
*getrymede* CP (H, C) 245.21,

*acc.pl.neut. getrymedu & ymbtrymedu* CP (H, C) 245.8

*onstrede* Or. 52.11

*nom.sg.fem.wk.*

*sio ful(l)fremede* ‘fulfilled’ CP (H, C)  
263.20

*gen.sg.wk.*

*ðæs fulfremedan* ‘fulfilled’ CP (H)  
385.18, 417.18

---

Inflected light stems (excl. t/d)

Total: x19

Syncope: 0

---

#### (C1.1.4) Inflected long -ed forms (Class 1)

##### a) excl. t/d forms

*nom.sg.fem.*

*unsyncopated*

*unliefedo* ‘permitted’ CP (H) 397.31

*predicative; gen.sg.masc.neut.*

*unali(e)fedes* CP (H, C) 61.14.15,  
191.6, 339.4, (H) 155.12, 425.9

*apocope:*

*geīeced* ‘increased’ Or. 116.11

***unalīfdes*** CP (C) 154.12

*nom/acc.pl.neut.*

*aræredu* ‘raised up’ CP (H) 311.10, -  
ede C

*ofersylefreda* ‘silver-covered’ Or.  
146.23

*unarīmede* ‘countless’ Or. 102.22

*asyndrede* ‘put asunder’ CP (C)  
268.19 (H *uninflected*)

***genemde*** ‘named’ Or. 14.24

***forbærndu*** ‘burnt’ CP (C) 222.24, -  
ede Or. 94.14,

***acende*** ‘brought forth’ CP (C) 96. 3, -  
nnedu H

***todældu*** ‘dealt’ CP (H) 413.27, -e CP  
(H) 233.4, -ede CP (C) 232.4

*gehælede* ‘healed’ CP (H) 395.34

***adrygde*** ‘dried’ CP (H) 445.3

***gehwirfdo*** ‘taken’ CP (C) 164.17, -  
edo H,

*unalī(e)fedu* ‘unlawful’ CP (H, C)  
265.10

***geīewde, geeawde*** ‘taken’ CP (H, C)  
195.18

*dat.sg.*

*gefrætwedum* ‘taken’ Or. 70.26

*acc.sg.masc.*

*beræðne* ‘deprived’ Chron. 887

*onbærnedne* CP (H, C) 295.25

*gegieredne* ‘adorned’ Or. 164.31

*gesuencedne* ‘disturbed’ CP (H, C)  
295.25

*acc.sg.fem.*

*betynede* ‘inclosed’ CP (H, C) 379.21

*Inst.sg.*

*forhwirfede* ‘taken here’ CP (H)  
369.23, ***forhwerfde*** C mode.

*nom/acc.pl.masc.*

***gecierde*** ‘taken here’ CP (H, C)  
271.12

***afæerde*** ‘terrified’ CP (H) 441.24

*afi(e)rrede* ‘removed’ CP (H, C) 139.5

(ge-, un-)lærede CP (H, C) 9.4.17,  
373.17, Or. 132.1, CP (C) 24.14

***unlærde*** ‘unlearned’ CP (H) 25.14

**arærdede** ‘raised up’ *CP (H)* 443.35  
**atiefrede** ‘painted’ *CP (H)* 153.23  
(uninflected in *C*), *CP (H, C)* 157.7  
**for-, gedemde** ‘judged’ *CP (C)* 190.15,  
*CP (H, C)* 191.17, *-ede CP (H)*  
191.15, *Or.* 190.35  
**a-, gefliemde** ‘put to flight’ *Or.* 44.24,  
174.23, 176.11, 180.10, 192.31,  
200.24, 208.11, 216.20, 230.25, *-ede*  
*Or.* 208.12, 238.21  
**gesemede** ‘settled’ *Or.* 64.34  
**totwæmde** ‘divided’ *Or.* 118.20  
**onbærnde** ‘burnt’ *CP (C)* 26.18, *-ede*  
*H*,  
**gedrycnede** ‘dried up’ *Or.* 102.10  
**forhiende** *Or.* 200.29  
**genemde** ‘named’ *CP (H, C)* 359.11  
(*C*) 358.12 (*H* uninflected), 429.26  
**genemnede** *CP (H, C)* 91.5  
**genemnde** *Chron.* 891  
**stænde** ‘stoned’ *CP (H, C)* 205.12  
**onældede** ‘kindled’ *CP (H, C)* 283.2 (*C*)  
330.12 *-ede CP (H, C)* 45.16 (*H*)  
331.12  
**bedældede** ‘dealt’ *CP (C)* 332.6, *-ede H*,  
**gefyldede** ‘filled’ *CP (H, C)* 41.15,  
331.12, *CP (C)* 250.1, 324.11, *-ede CP*  
(*H*) 251.1, 325.11,  
**gehælede** ‘healed’ *CP (H)* 399.18  
**untældede** ‘untold’ *CP (H, C)* 25.12,  
351.21, (*H*) 387.32  
**drygde** ‘dried’ *CP (H)* 69.2  
**gefēgde** ‘united’ *CP (H)* 361.21, *-ede*  
*CP (H, C)* 253.14, (*C*) 360.21  
**behrin(c)gde** ‘surrounded’ *CP (H, C)*  
163.16  
**gemengde** ‘mingled’ *CP (H)* 399.3  
**getigde** ‘tied’ *CP (C)* 134.15, *-ede H*  
**gewægde** ‘oppressed’ *CP (H)* 415.1  
**awiergde** ‘defended’ *CP (H)* 329.6, *-*  
*ede C*  
**adræfde** ‘driven away’ *Or.* 240.6  
**gedrefde** *CP (H)* 213.5, 443.12,  
455.15.18, (*H, C*) 271.14, *Or.* 178.5, *-*  
*ede CP (H, C)* 127.21, 293.24, (*C*)  
212.5  
**gehwi(e)rfde** ‘taken here’ *CP (H, C)*  
205.1 (x2), 267.20, *-ede Chron.* 30

**unaliefde** ‘unlawful’ *CP (H)* 77.21,  
433.12, *-ede CP (H)* 383.6, (*C*) 76.21  
**oferswiðde** ‘overcome’ *CP (H, C)*  
21.8, 205.4, (*H*) 429.30.34, 431.12,  
457.17, *Or.* 182.7, *-ede CP (H, C)*  
179.3  
**gesmeðde** ‘smoothed, evened’ *CP (H,*  
*C)* 253.14  
**alīesde** ‘redeemed’ *CP (H)* 301.9, *Or.*  
214.24 = *aliesede CP (C)* 300.9  
**alælwede** *Or.* 194.10,  
**gegi(e)rede** ‘taken’ *CP (H, C)* 93.14,  
**besierede** ‘ensnared’ *Or.* 120.27  
**ascrencte** ‘tripped up’ *CP (H, C)*  
133.1, 129.7, 215.12  
**besencte** ‘submerged’ *CP (H, C)*  
233.18  
**geswencte** ‘troubled’ *CP (H, C)*  
259.19, *ge-, for-,*  
**ofðorycte** ‘oppressed’ *CP (H, C)* 51.24,  
271.17, (*C*) 118.15, (*H*) 302.7, *-ccede*  
*CP (H)* 119.15

nom/acc.pl.fem.

**gefylde** ‘defiled’ *CP (C)* 4.10, *-æ H, -e*  
*CP (H)* 449.8  
**gehælda** ‘healed’ *CP (H, C)* 271.1, *-*  
*ede CP (H, C)* 183.21  
**nemnede** ‘named’ *Or.* 72.12  
**bety:neda** ‘enclosed’ *Or.* 106.19.21, *-e*  
*CP (H, C)* 245.21

gen.pl.

**awiergedra** ‘defended’ *CP (H, C)*  
251.7

dat.pl.

**geætredum** ‘poisoned’ *Or.* 134.34  
**ætiewdum** ‘manifested’ *CP (H, C)*  
155.10  
**awiergdum** ‘defended’ *CP (H)* 401.25

dat.sg.

**ðæm ungetydum folce (ty:an)** ‘the  
untaught people’ *CP (H, C)* 365.22

gen.pl

*ðara ungetydra* ‘untaught’ CP (H)  
103.15

*nom.sg.masc.*

*se ancenneda* ‘brought forth’ CP (H)  
47.3  
*se forhwi(e)rfeda* CP (H, C) 79.19  
*se gelæreda* ‘learnt’ CP (H, C) 59.2  
*se alīefeda* ‘permitted’ CP (H) 401.4

*nom/acc.sg.neut.*

*ðæt āhrērede* ‘moved’ CP (H, C)  
297.16  
*ðæt gehwelede* ‘inflamed’ CP (H, C)  
275.5  
*ðæt (un)aliefede* ‘permitted’ CP (H, C)  
145.10, (C) 425.15,16

*gen.sg.*

*ðæs forhwirfedan* ‘taken here’ CP (C)  
66.16  
*ðære unliefedan* ‘permitted’ CP (H)  
397.13

*acc.sg.*

*ðone alīefedan* CP (H) 397.13  
*ðone unlīefedan* CP (H) 397.36  
*ða gedrēfedan* CP (H) 425.26

*nom.sg.masc.*

*se getyda (ty:an)* ‘to instruct’ CP (H)  
397.15  
*se ancenda* ‘brought forth’ CP (C)  
46.3  
*se aw(i)ergda* ‘wicked’ CP (H, C)  
361.16. (H) 463.30

*nom.sg.fem.*

*sio unlīfde* ‘unallowed’ CP (H) 401.5

*nom/acc.sg.neut.*

*ðæt unliefde* CP (H) 427.11  
*ðæt ungetyde* CP (H) 389.33

*nom.pl.masc*

*ahi(e)rde* ‘heard’ CP (H, C) 363.20

*nom/acc.pl.*

*eowre agæledan* ‘hindered’ honda CP  
(C) 64.17  
*ða unge-, gelæredan* CP (H, C) 9.18,  
25.16, 29.18, (H) 385.2.26  
*ða unalī(e)fedan* CP (H, C) 21.4,  
177.25, (H) 427.8, 431.22  
*ða awiergedan* ‘wicked’ CP (C)  
248.15, (H) 373.25

*gen.pl.*

*ðara awiergedena* CP (C) 248.23

*dat.pl.*

*ðæm gelæredum* CP (H, C) 205.8  
*ðæm awiergedum* CP (H) 375.6

w- forms

*nom.sg.fem.*

*sio gesirede* ‘ensnared’ CP (H) 436.13

*acc.sg.*

*ða gesiredan* CP (H) 435.13

*gen.sg.*

*ðæs forhwirfdan* ‘taken here’ CP (H)  
67.16, 435.24  
*ðæs aliefdan* CP (H, C) 339.5  
*ðæs geswenctan* CP (H, C) 87.25  
*ðæs awi(e)rgdan* CP (H, C) 285.19

*dat.sg.*

*anum nicealtan huse* ‘washed’ Or.  
286.30

*ðæm adræfdan* ‘driven’ Or. 232.23  
(TH)

*ðæm forhwi(e)rfdan* CP (H, C) 243.4

*acc.sg.*

*ða besengdan* ‘singed’ *Or.* 92.32 *TH*

*nom/acc.pl.*

*ða afyrðan* ‘removed’ *CP (H)* 407.33, 409.1

*ða awierðan* *CP (H)* 249.15, 372.25

*hiera awiergðan* *CP (H, C)* 269.19

*gen.pl.*

*ðara awierðena* *CP (H)* 249.23

*ðara ungetyðena* *CP (C)* 102.15

*dat.pl.*

*ðæm awierdum* *CP (C)* 374.6

---

Inflected heavy roots (excl. t/d)

Weak PP, Weak adj. inflexions:

Total: 55

x31 unsyncopated

x24 syncopated

(excl. dental)

Weak PP, Strong adj. inflexions:

Total (excl. nom/acc.pl.neut &

nom.sg.fem): x139

Syncope: x80

Total heavy: 194

Syncope: 104

---

---

Inflected heavy roots (excl. t/d)

Total Strong (adj.) nom/acc.pl.neut &

nom.sg.fem: x22

Syncope: x8

Apocope: x1

---

(b) *Inflected forms with root-final d and t*

(b<sup>1</sup>) *ǃ+t/d*

*nom.pl.neut.*

*besett* ‘beset, appointed’ *CP (H, C)*

195.19

*acc.sg.fem.*

*gesette* ‘set’ *Or.* 160.8

*nom.pl.masc.*

*gesette* ‘set’ *CP (H, C)* 117.19,

119.25, 171.19, 197.1, 319.19,

321.7.10, *Or.* 200.12

with masc ending:  
gesette ‘set’ CP (H, C) 167.2

nom/acc.pl.wk.

ða gesettan CP (H, C) 175.15, 191.6,  
189.15.16

dat.pl.wk.

ðæ ofergesettan CP (H, C) 189.23

---

ǃ+t/d

Total: 16

tt: 16

apocope (n.a.p.n) x1

---

(b<sup>2</sup>) ǃ+t/d

nom/acc.sg.neut.wk.

ðæt forhydde CP (H, C) 377.6

acc.sg.wk.

ða geeaðmeddan ‘humiliated’ CP (H)  
425.26

nom/acc.pl.wk.

ða underðioddan ‘subjected’ CP (H,  
C) 131.19 etc. (8 HC)

nom.pl.neut.

mētte CP (H, C) 355.5,

gen.sg.masc.neut.

gehyddes ‘hidden’ CP (H, C) 153.15,  
157.18

nom.pl.masc.

anidde ‘forced’ Chron. 823

genī(e)dde CP (H, C) 11.10, 47.22,

49.1, 137.19, (C) 302.11.19h, (H)

455.19, Or. 250.14

ofdrædde ‘terrified’ CP (H, C)

109.23, 239.7

afēdde ‘fed’ Or. 152.19

alædde ‘lead out’ CP (H, C) 267.15 (p  
102)

geēaðmēdde ‘humiliated’ CP (H)

423.10, 443.12

aðiedde ‘separated’ CP (H, C) 355.8

underði(e)dde CP (H, C) 37.9, 79.7,

103.20, 107.15, 109.15,24, 111.4.7.13,

135.10, 159.6, 189.22, 191.5, 195.2.3,

201.17.21, (H) 302.15.18, Or. 184.35

gelīc(c)ette ‘imitated’ CP (H, C) 149.3

nom.pl.fem.

ungebētta ‘uncorrected’ CP (C)

220.17

gebrædda ‘broadened’ CP (H, C)

31.13

with masc. ending:

genēdde ‘forced’ Or. 110.1

gen.pl

ðara underðied(d)ra ‘subjugated’ CP

(H, C) 147.1

---

ǃ+t/d

Total: 55

tt/dd: 55

---

(b<sup>3</sup>) VC+t/d

*nom/acc.pl.wk.*

*ðæt gehæfte CP (H, C) 257.11*

*ða ofergylðan CP (H, C) 171.22*

*ða gehæftan CP (H) 443.10*

*nom.pl.neut.*

*onhield CP (H, C) 61.12,*

*gesciende CP (H) 245.24 (uninflected in C)*

*gewende ‘turned’ CP (H, C) 57.12*

*Inst.sg.*

*awende mode ‘changed mind’ CP (H, C) 39.22*

*nom.pl.masc.*

*afyrhtede ‘terrified’ Or. 194.10 (only one without syncope)*

*gebielde ‘emboldened’ Or. 156.16*

*gereorde ‘satisfied’ CP (H, C) 137.24, 283.12*

*gesciende ‘shamed’ CP (H) 389.32*

*gewende ‘turned’ CP (H) 405.30.36*

*be-, oðfæste ‘entrusted’ CP (H, C) 7.2, 191.24*

*gehæfte ‘taken captive’ CP (H) 307.7, (H, C) 329.9*

*with masc. ending:*

*fortende ‘burnt off’ Or. 46.14, awende Or. 250.30*

*ungewilde ‘uncontrolled’ Or. 284.6*

*dat.pl.*

*to gewildum Or. 234.4, 148.9, 154.6*

*to gewildon gedon Or. 132.9, -um Or. 134.32*

---

VC+t/d

Total: 26

Syncope: 25

dd, tt : x0

---

(c) t/d roots inflected with -ne

*acc.sg.masc.*

*gehæftne CP (H) 423.19*

*gesc(i)endne CP (H, C) 229.21*

*gesetne CP (H) 441.31*

*gewildne CP (C) 218, 21, Or. 132.22*

(d) sellan type

*gebrote ‘brought’ CP (H, C) 269.35*

*acwealde ‘slew’ Or. 88.5*

*ge-, offerreahte ‘related’ CP (H, C) 205.3, 377.22, (H) 307.6*

*astreahte CP (H, C) 109.23, getyde Or. 152.29*

*unbedohte ‘thought’ CP (H) 435.2  
forðohte Or. 190.17*



*nom.sg.fem.*  
*geðoht syn CP (H) 417.16*

*nom.pl.neut.*  
*geworht weorc ‘wrought’ CP (H, C) 235.15, (masc ending)*  
*gebrohte CP (H, C) 179.18,*  
*gesealde ‘given’ CP (C) 364.14*  
*(uninflected in H),*  
*gewarhte Or. 216.4*

*(sellan type)*  
*masc. endings*  
*brohte CP (H, C) 343.4*  
*geworhte CP (H) 449.7*  
*gesealde Or. 214.5, 240.7*

*dat.pl.*  
*forworhtum CP (H, C) 37.1*

*nom.sg.fem.wk.*  
*sio geðohte CP (H) 419.11.15*

*nom.acc.pl.wk.*  
*ða geðohtan CP (H, C) 19.24 etc.*  
*ða geworhtan CP (H, C) 19.24, (H) 413.3*  
*hiera geworhtan CP (H) 413.5.7*

*acc.sg.wk.*  
*ða geðohtan CP (H) 419.16*

*gen.sg.wk.*  
*ðære beðohtan CP (H) 435.5*

## (C1.2) Strong *-en* past participles (Cosijn 1888: §54)

### (C1.2.1) Short syllables

#### (a) *Root-final stop forms*

*brecan* ‘to use’

acc.sg.fem. *tobrocene* ‘broken’ CP (H, C) 65.4, Or 202.4

nom/acc.pl.masc. *for-*, *tobrocene* CP (H) 389.26, 405.4

predicative with masc. ending *-e*:  
*forbrocene* CP (H) 405.1

*locen* ‘locked’

acc.sg.fem. *onlocene* ‘unlocked’ CP (H, C) 155.6

nom/acc.pl.masc. *belocene* ‘enclosed’ CP (H, C) 227.25, CP (H) 399.29

predicative with masc ending *-e*,  
*belocene* ‘inclosed’ Or. 112.35

*freten* ‘eaten’

nom/acc.pl.masc. *fretene* ‘eaten’ CP (H, C) 235.11

*gegripen* ‘snatched’

nom/acc.pl.masc. *gegripene* ‘snatched’ CP (H, C) 19.11, 375.16

*ongietene* ‘perceived’

nom/acc.pl.masc. *ongietene* ‘perceived’ CP (H, C) 235.17,

*gesceapen* ‘formed’

nom/acc.pl.masc. *gesceapene* CP (H, C) 201.12, 233.21, 249.17, (C) 218.25, (H) 405.27

*geseten* ‘set’

nom/acc.pl.masc. *gesetene* ‘set’ Or. 104.27

dat.pl. *gesetenum* ‘set’ Or. 10.19,

predicative with masc ending *-e*,

*ge-*, *tosetene* Or. 130.16, 14.18,

nom/acc.sg.neut.wk. *ofsetene* CP (H, C) 119.20

*besmiten* ‘polluted’

nom/acc.pl.masc. *besmitene* CP (H, C) 104.24, (H) 409.7

*(ge)sniden* ‘cut’

nom/acc.pl.masc. *(ge)snidene* ‘cut’ CP (H, C) 205.13, 253.14

*unaðroten* ‘unwearied’

nom/acc.pl.masc. *unaðrotene* CP (H, C) 171.9

*begieten* ‘obtained’

nom/acc.pl.fem. *begieten* Or. 66.24

*gewi(e)ten* ‘known’

nom/acc.pl.masc. *gewi(e)tene* ‘known’ CP (C) 310.4, CP (H, C) 277.4, 213.16

nom/acc.pl.fem. *wieten* ‘known’ CP (C) 152.1

predicative with masc ending *-e*,  
*witene* CP (H) 153.1

*writen* ‘written’

nom/acc.pl.masc. *awritene* ‘written’ CP (H, C) 79.6, Or. 258.14

predicative with masc ending *-e*,  
*awritene* CP (H, C) 5.13

*toslopen* ‘relaxed’

nom/acc.sg.neut.wk.  
*toslopene* CP (H, C) 283.12

---

Light root-final stop forms  
(strong *-en PP*)

Total: 38  
Syncope: 0

---

(b) Non-stop light forms

*ðurhtogen* ‘carried through’  
nom.sg.fem. *ðurhtogen syn CP (H)*  
417.16 (apocope)  
nom.sg.fem.wk. *(un)ðurtogene*  
‘(un)performed’ *CP (H, C) 329.14 x2*

*fulboren* ‘full born, noble born’  
nom/acc.pl.neut. *fulborene CP (H)*  
383.35

*(un)boren* ‘(un)born’  
nom/acc.pl.masc. *geborene* ‘born’ *Or.*  
214.22  
nom/acc.pl.wk. *unborenan* ‘unborn’  
*CP (H, C) 367.20*

*forsæcen* ‘forsaken’  
nom/acc.pl.neut. *forsæcene, -sacene*  
*CP (H, C) 349.16*

(b1) Contracted verbs:

*gesewen* ‘seen’  
nom/acc.pl.neut. *gesewene Or. 4.22,*  
184.20  
acc.sg.fem. *gesewene CP (H) 413.15*  
  
nom/acc.pl.masc. *gesewene* ‘seen’ *CP*  
*(H, C) 241.17*  
nom.acc.sg.neut.wk. *gesewene CP (H,*  
*C) 259.24,*  
nom/acc.pl.fem. *gesewena CP (H, C)*  
241.1  
acc.sg.wk. *ungesewenan CP (H, C)*  
257.8,  
Predicative with masc. ending *-e*  
*gesewene CP (H) 413.15.16, Chron.*  
773,

*aðwægen* ‘washed’  
nom/acc.pl.neut. *aðwægene CP (H, C)*  
105.17

nom/acc.pl.masc. *aðwægene CP (H)*  
435.1

*slægen* ‘slain’  
nom/acc.pl.neut. *ofslægene Chron 2*

nom/acc.pl.masc. *ge-, for-, ofsla-,*  
*slægene* ‘slain’ *CP (H, C) 137.23,*  
205.14, *(H) 433.35, Or. 44.29,31,*  
56.9,  
64.32, 70.17, 80.22, 88.3, 178.30,  
230.33, *Chron (x8),*  
nom.acc.sg.neut.wk. *geslægene CP*  
*(H) 441.25*  
gen.sg.wk. *ofslægenan CP (H, C)*  
167.3.21

*getogen* ‘restrained’  
nom/acc.pl.masc. *a-, getogene*  
‘restrained’ *CP (H, C) 171.18, (H)*  
389.30

*ðurhtogen* ‘carried through’  
 dat.pl. *ðurhtogenum* CP (H) 403.15

predicative with masc. ending -e,  
*ðurhtogene* CP (H) 457.8

acc.sg.wk. *ðurhtogenan* CP (H) 435.13  
 inst.sg.wk. *ðy ðurhtogenan weorce* CP (H, C) 367.12  
 nom/acc.pl.wk. *ðurhtogenan* CP (H, C) 177.22, (C) 20.1, (H) 419.17  
*ða ðurhtogena scylda* CP (H) 21.1

dat.pl.wk. *ðæm ðurhtogenum scyldum* CP (H) 413.8

*gebogen* ‘submitted’  
 nom/acc.pl.masc. *gebogene* Or. 78.7

*gecoren* ‘chosen’  
 nom/acc.pl.masc. *gecorene* ‘chosen’ CP (H, C) 27.18, CP (H) 467.32

dat.pl. *gecorenum* ‘chosen’ CP (C) 218.23, CP (H, C) 237.20  
 nom/acc.pl.wk. *gecorenan* ‘chosen’ CP (H) 381.18, 409.12

*cumen* ‘come’  
 nom/acc.pl.masc. (*ofer*)*cumene* Or. 178.5, 224.6,

*drifen* ‘driven’  
 nom/acc.pl.masc. *adrifene* ‘driven’ CP (H, C) 25.12, 249.15, fx2

*faren* ‘departed, gone’  
 nom/acc.pl.masc. *tofarene* ‘departed’ Or. 78.12, 116.29,  
*utafærene* CP (H) 385.8

nom.sg.masc.wk. *gefarena* ‘travelled’ CP (H, C) 43.18

gen.sg.wk. *gefarenan* CP (H, C) 43.22

dat.sg.wk. *gefarenan* CP (H, C) 43.14  
 nom/acc.pl.wk. *gefarenan* Or. 86.28

*forgi(e)fen* ‘forgiven’  
 nom/acc.pl.masc. *forgi(e)fene* ‘forgiven’ CP (H, C) 135.14, Or. 162.15  
 nom/acc.pl.fem. *forgifena* ‘forgiven’ CP (H) 411.11

predicative with masc ending -e,  
 (*un*)*forgiefene* CP (H) 419.4  
*unforgifne* CP (C) 220.17

(*up*)*ahæfene* ‘uplifted’  
 nom/acc.pl.masc. (*up*)*aha*, (*up*)*ahæfene* ‘uplifted’ CP (H, C) 181.8,22, 197.3, 205.1, 211.3.11, 271.21, 215.12, 321.11, CP (H) 391.12, 393.1, Or. 96.5

nom.sg.masc.wk. *upahafena* ‘uplifted’ CP (H, C) 121.10, 183.14,  
 nom.acc.sg.neut.wk. *upahafene* CP (H, C) 257.15  
 dat.sg.wk. *upahæfenan* CP (H) 305.2,

nom/acc.pl.wk. *upahafenan* CP (H, C) 15.12, 17.11, 177.2, 181.20, 209.2, 299, (H) 301.3.6, (C) 302 (*ter*)*h*, 304(1)*h*  
 dat.pl.wk. *ðæm upahæfenum* CP (H, C) 299.5, 371.5, (H) 301.15, 303.17,

*forloren* ‘forlorn’  
 nom/acc.pl.masc. *forlorene* CP (H, C) 233.22, CP (H) 387.29

acc.sg.wk. *fo(r)lorenan* CP (H, C) 123.11, 251.14

*forlegen* ‘defiled’  
 nom/acc.pl.masc. *forlegene* ‘defiled’ CP (H) 403.34  
 dat.sg.wk. *forlegenan* CP (H) 405.15

*belifen* ‘dead’  
nom/acc.pl.masc. *belifene* ‘dead’ *Or.*  
86.26

*scofen* ‘banished’  
nom/acc.pl.masc. *togescofene* *CP (H, C)* 375.20

*oferstigen* ‘surmounted’  
nom/acc.pl.masc. *oferstigene* *CP (H, C)* 111.16  
*beswicen* ‘deceived’  
nom/acc.pl.masc. *beswicene* *CP (H, C)* 363.13, *(H)* 431.1.2, *Or.* 176.8, 196.2

*geði(e)gen*  
nom/acc.pl.masc. *geði(e)gene* *CP (H, C)* 19.10, 375.15, *(H)* 389.25

*unwriðen* ‘unbound’  
nom/acc.pl.fem.  
*unwriðena* ‘unbound’ *CP (H, C)*  
125.16

*wrecen* ‘driven’  
predicative with masc ending -e,  
*gewrecene* *CP (C)* 220.18,

*beswicen* ‘laboured’  
nom.acc.sg.neut.wk. *beswicene* *CP (H)* 415.35,  
gen.sg.wk. *beswicenan* *CP (H)* 465.8,

*foresprecen* ‘afore said’  
nom.sg.masc.wk. *se foresprecena*  
‘afore said’ *Chron.* 885

*holen* ‘hidden’  
nom.sg.masc.wk.  
*forholena* ‘hidden’ *CP (H, C)* 377.7

*scoren* ‘shaved’  
nom.acc.sg.neut.wk. *scorene* *CP (H, C)* 215.8

*ðræwen* ‘thrown’  
nom.acc.sg.neut.wk. *tweo-*, *ge-*,  
*ðræwene* *CP (H, C)* 87.22, 89.2

---

---

### Light root-final non-stop forms (strong -en *PP*)

Total: 130  
Syncope: 1

---

### (c) Consonant-initial suffixes

acc.sg.masc.  
*cymenne* ‘come’ *CP (H, C)* 229.20,  
*forgietenne* ‘forgotten’ *CP (H, C)* 159.9  
*benumenne* ‘deprived’ *Chron.* 658  
*ofslægenne* *Chron.* 755

gen.pl.  
*his*, *ðara a-*, *gecorenra* ‘chosen’ *CP (H, C)* 43.22, 219.7, 237.21, *CP (H)* 381.21, 465.10, 467.11  
*ofslægenra* ‘slain’ *Chron.* 871  
*ofslagenre* *Or.* 94.12  
*ðara forðgefarenra* *CP (H, C)* 77.19,  
*ðara gefarenra* *Or.* 162.24,

## (C1.2.2) Long -en syllables

### (a) Root-final stop forms

#### (a<sup>1</sup>) [t]+en

*gehaten* ‘commanded’  
nom.sg.fem. (ge)hatenu *Or.* 112.10,  
116.5.12, 162.31, 168.21, 132.26,  
134.2 nom.pl.masc. (ge)hatene ‘CP  
(H, C) 121.3, 139.15, 183.5, 187.16,  
*Or.* 44.25, 118.2, 146.22, 150.8,  
176.16, 196.2  
nom/acc.pl.fem. hatene *Or.* 46.16

*forlāten* ‘permitted’  
nom.pl.masc. forlætene *CP (H)* 439.14  
  
nom/acc.pl.fem. *forlātna* *CP (H,*  
*C)* 163.20

Syncope after [t]: 1/20

#### (a<sup>2</sup>) [p]+en

*bewopen* ‘bewailed’  
nom.pl.masc. bewopene ‘bewailed’  
*Or.* 92.30

*toworpen* ‘thrown away’  
nom.sg.fem. toworpenu *Or.* 128.28  
nom.pl.masc. toworpene ‘cast away’  
*CP (C)* 134.3  
*a-*, *toworpne* *CP (H, C)* 133.11,  
235.4.13, 247.2, *CP (H)* 135.3  
nom/acc.pl.fem. toworpena ‘cast out’  
*Or.* 5.11  
nom/acc.pl.wk. *aworpnan* ‘cast off’  
*CP (H, C)* 249.18  
dat.sg.wk. *aworpnan* *CP (H, C)* 113.4,  
357.16, (H) 405.16  
gen.sg.wk. *aworpnan* *CP (H, C)*  
301.18.  
nom.sg.masc.wk. *aworpnā* *CP (H, C)*  
357.23

Syncope after [p]: 11/15

#### (a<sup>3</sup>) [d]+en

*worden* ‘perished’  
nom.pl.masc. for-, gewordene  
‘perished’ *CP (H, C)* 117.3, *Or.* 64.33

*befealden* ‘involved’  
nom.pl.masc. *befealdne* ‘involved’ *CP*  
*(H, C)* 271.12

*gehealden* ‘satisfied’  
nom.pl.masc. *gehealdne* *CP (H)*  
403.15

*aðunden* ‘swollen’  
nom.pl.masc. *aðundene* ‘swollen’ *CP*  
*(H, C)* 181.22, 211.3, 321.11,  
302.10(h)  
nom/acc.sg.neut.wk. *aðundene*  
‘swollen’ *CP (C)* 184.13, *aðundne* *CP*  
*(H)* 185.13

*forsceaden* ‘scattered’  
nom.pl.masc. *forsceadene* ‘scattered’  
*CP (C)* 134.16, *forsceadne* *CP (H)*  
135.16,

*bunden* ‘bound’  
nom.pl.masc.  
*gebundene* ‘bound’ *CP (H)* 19.7, *CP*  
*(H, C)* 139.24, 177.21, 179.4, 305.4,  
*CP (H)* 393.23.24, *Or.* 70.29

*gebundne* ‘bound’ *CP (C)* 18.7, *CP*  
*(H, C)* 117.23, *CP (H)* 393.20, 399.20,  
401.20, 413.8, 417.31, 433.36

nom/acc.pl.fem. *gebundne* CP (H, C)  
123.15.17

*agolden* ‘repaid’  
nom/acc.pl.neut. *agoldene* Or. 250.31

*wealden* ‘under control’  
Inst.sg.masc. *mid gewældene fultume*  
Or. 192.12

*anfunden* ‘found’  
nom.pl.masc. *anfundene* CP (H)  
239.24  
*onfundne* CP (C) 238.24

Syncope after [d] 15/34

(a<sup>4</sup>) [k]+-en

*besolcen* ‘slow’  
nom.pl.masc. *besolcne* ‘slow’ CP (H,  
C) 289.15

*bearne:acen* ‘pregnant’  
nom/acc.pl.wk. *bearnēacnan*  
‘pregnant’ CP (H, C) 367.14 (-can C)

nom/acc.pl.fem. *bearneacne* CP (C)  
366.3, *bearneacene* ‘pregnant’ CP (H)  
367.3

*druncen* ‘drunken’  
nom.pl.masc. (a)*druncne* ‘drunk’ Or.  
130.25, 226.11

gen.sg.wk. *fordruncnan* ‘drunk’ CP  
(H, C) 295.6

*besuncen* ‘sunk’  
nom.pl.masc. *besuncene* ‘sunk’ Or.  
88.14

Syncope after [k] 6/7

(a<sup>5</sup>) [g]+-en

*anbestungen* ‘pushed’  
ða *anbestungne* CP (H) 171.11

*anbestungen* ‘thrust in’  
nom/acc.pl.wk.  
*anbestungnan* CP (C) 170.11

Contracted verbs

*onfongen* ‘taken’  
nom/acc.pl.neut. *ge-*, *onfangnu* CP  
(H) 303.10, (C) 234.7  
(no -n) *onfonge* CP (H) 235.7, CP (H,  
C) 235.4)  
nom.pl.masc.  
*gefongene* ‘taken’ Or. 70.30

*be- gefongne* CP (H, C) 171.15,  
377.23, CP (H) 393.2, Or. 154.7

nom/acc.sg.neut.wk.  
*underfongne* CP (H, C) 59.13, 367.11

dat.sg.wk. *anfangenan* ‘received’ CP  
(C) 120.10  
*anfangnan* CP (H) 121.10

gen.sg.wk.  
*underfangenan* CP (H) 37.14

*underfangenan* CP (H) 35.14

*oferðungen* ‘excelled’  
nom.pl.masc. *oferðungne* CP (H, C)  
111.15

Syncope after [g] 12/16

---

---

Heavy root-final stop forms  
(strong *-en PP*)

Total: 92

Syncope: 45

---

---

**(a<sup>6</sup>) Consonant-initial suffixes**

gen.pl.

*gefangenra Or.* 126.4

acc.sg.masc.

*gebundenne Or.* 146.32, 196.28, 230.29, 238.13, *Chron.* 796

*aworpenne Chron* 867

*gehealdenne CP (H)* 409.7, 411.4

*gewealdenne Or.* 138.7

**(b) Root-final non-stop forms**

Stop+non-stop clusters and  
affricates

nom.pl.masc. *aweallene CP (H, C)*  
271.15

**(b<sup>1</sup>) [ks]+-en**

Syncope after [l]: 0/3

*fulweaxen* ‘grown’

nom/acc.pl.neut. *fulweaxne CP (H)*

381.17

nom/acc.pl.fem.

*predicative a-, fulwe[a]xene CP (H)*

383.30, 401.14

**(b<sup>3</sup>) [f/v]+-en**

*acorfen* ‘carved, cut’

nom/acc.pl.neut. *acorfena Or.* 160.15

nom.pl.masc. *forcofene* ‘cut’ *CP (H, C)* 339.19,20

Syncope after [ks]: 1/3

Syncope after [f/v]: 0/3

**a) Fricatives and sonorants**

**(b<sup>2</sup>) [l]+-en**

*oðfeallen* ‘fallen’

nom.sg.fem. *oðfeallenu CP (H, C)*

3.13

nom.pl.masc. *afeallene* ‘fallen’ *CP*

*(H)* 391.13,

**(b<sup>4</sup>) [n]+-en**

*twispunnen* ‘twice spun’

dat.sg. *twispunnennum CP (H, C)* 83.23

*gewunnen* ‘fought’

acc.sg.fem. *gewunnene Or.* 56.27

*aweallen* ‘welled up’

nom.pl.masc. *oferwunnene*

‘conquered’ *CP (H)* 387.26 *Or.* 222.28



*gesponnen* ‘persuaded’  
nom.pl.masc. *gesponnene* CP (H)  
399.2

Syncope after [n]: 0/5

(b<sup>5</sup>) [w]±-en

*toflowen* ‘flown’  
nom.pl.masc. *toflowene* CP (H, C)  
271.18

*a-*, *beheawen* ‘beaten’  
nom.pl.masc. *a-*, *beheawene* CP (H,  
C) 253.18, CP (H) 411.17

Syncope after [w]: 0/3

---

Heavy root-final non-stop  
forms  
(strong -en PP)

Total: 17  
Syncope: 1

---

### (b<sup>6</sup>) Consonant-initial suffixes

acc.sg.masc.  
*forcofenne* CP (H) 199.17 (-edne C),  
*gewunnenne* CP (H, C) 227.6

acc.sg.fem.  
no final -n  
*gebune* Or. 96.4

## Appendix C2 Past Participles in Lindisfarne

### (C2.1) Weak Class 1 uninflected -ed forms

#### (C2.1.1) Light uninflected forms in -ed

*āstyriga* ‘to stir, excite’

*astyred* L. 10, 41

*gestyriga* ‘excite’

*gestyred* Mt. 15,22. 21,10. 24,6. 24, 29. Mk. 5, 39. 6, 50. 13,25. L. 1, 12. 15, 20. J. I 7, 4. 5, 7. 12, 27. 13, 21. 14, 27

*āwæliga*

*auæled* Mk. 5, 18.

*forwered*

(pp.) *f’uered* Mt. 9.16.

*geberiga* (Class 1 *nerian* type)

*gebered* Mk. 5, 15. 5,18. 9,20

*gefēriga* (Class 1 *nerian* type)

*gefēred* Mt. 14, 11. L. 24, 51.

*geðreaga* ‘reproach’ (uncertain, strong/weak in BT)

*geðread* Mk. I 4,2. L. I. 5 14, *geðreadð* Mk. I, 5. 13

*heriga* ‘praise’

*hered* Mk. 1 2, 12

*inhroera*

*inhroered* Mt. 27, 51.

*efnegetrymma* (sub a)

*efnegetrymed* J. I 8, 7

*getrymma*

*getrymed* L. I 4, 7. J. I 7, 4. 13, 21

*getella* ‘tell’ Class 1

*geteled* Mt. 7,24. L. 14,12. 22,37

---

Light forms (excl. *t/d*-final stems) total:  
x34 (0% syncopated)

---

#### Root-final dentals (light)

*geondeta* ‘to confess’

*geondetad* L. I 9, 7. J. I 3,10;

*geondetað* L. 12, 8

*āsetta*<sup>77</sup> ‘set’

*asetted* Mt 28,6. J. 20, 7. 20, 12

*tōgesetta*

*togesetet* Mt. I 9, 11. I 9, 14;

*togesetted* L. 10, 8

*gesetta*

*gesetted* Mk. 4, 21. L. I 4, 2. 2, 12. 2, 16. 3, 13. 23, 55. J. 19, 41; *gesettet*

---

<sup>77</sup> The *settan* type also includes *atreddan*, ‘to search out’; *cnyttan*, ‘to bind, knit’; *hreddan*, ‘to rescue’; *hwettan*, ‘to whet’ and *lecgan*, ‘to lay’ etc (sub division (a) in Wright & Wright 1925). Therefore, these would be expected to class as light.

Mk. 4, 21. 15. 47. L. I 6, 10. 6, 48. 23, 53. J. I 2,2. 19,29; *geseted* Mt I 5, 15. 5, 14. 7, 25. L. 3, 9; *gesetet* Mt I 14, 1.114, 5.3, 10. L. 13,6

*geinsetta*  
*geinsetet* J. I 1, 10.

*foregesetta*  
*foregeseted* Mt. I 9, 18; *f'egesettet* L. I 9, 14.

*eftāsetta*  
*eftasettet* L. 19, 20.

*efnegesetta*  
*efnegesettet* L. 7, 8;

*ofergesetta*  
*ofergesettet* J. 11, 38.

*ofersetta*  
*of'settet* J. 21, 9.

*ofsetta*  
*ofsettet* J. I 2, 5.

*ymbsetta*  
*ymbsetet* L. 21,20.

---

---

Light *t/d*-final forms total:  
x39 (0% syncopated)

---



---

Light forms (all)  
x73  
(0% syncopated)

---

## Sellan/sald type: geminates

Forms with a pret. without *-I* in Prim Gmc (including /ll/ forms which form their geminate on analogy with type 1(a) according to Wright & Wright (1925).

*āsealla* (Class 1)  
*asāld* Mt 28, 18.

*ymbsealla*  
*ymbśald* Mk. 9, 42. L. 21, 20

*sella*  
*sald* (13 times).

*eftgesella*  
*eftgesald* L. 14, 14

---

---

Sellan types:  
x72

---

*gesella*  
*gesald* Mt. (13 times). Mk. (13 times). L. (14 times). J. (4 times); *gesāld* Mt. I 19,14. 4,12. 13,11(2). 14 11. 20,18. 21,43. L. 18,32. 21, 16. 24,7; *gsald* Mk. 10,33;

x72 sellan types

(C2.1.2) Heavy uninflected Class 1 -ed participles

(a) Syncopated

*gecēiga* ‘to call’ 1,35; ***geced*** L. I 5, 1  
***geceigd*** Mt. 5, 9. 5, 19. 23,8. Mk. I  
2.15. 3,23. L. 2,21. 21,37; ***geceid*** L.  
x9 syncopated (*ceigan*)

(b) Unsyncopated

*inlāda* wv ‘to lead’  
*inlāded* Mk. I 4, 4  
*ingemōeta* ‘to find, meet with’  
*ingemoetet* J. I 2, 3  
*gewrōega* ‘to accuse’  
*gewroged* Mt. 27, 12  
*abærna* ‘to burn’  
*aberned* L. 12, 49  
*ofgebēga* ‘to bow’  
*ofgebeged* L. 24, 29  
*ādrysna* ‘to quench’  
*adrysned* Mk.9,46  
*underlāda* ‘bring’  
*underlaeded* Mt I 3, 12  
*alēfa* ‘permit’  
*alēfed* Mk. 2, 24. 3, 4; *alefed* L. 6, 9  
*underlāded* L. 5, 11  
*āōehta* ‘follow, persecute’  
*aoehtad* L. 21, 12  
*gelāfa* ‘to leave’  
*gelāfed* Mt. 15, 37  
*oēhta*  
*oehtad* L. 11, 49  
*æfterfylga* ‘follow’  
*æfterfylged* Mk. I 5, 1  
*geōehta*  
*gewoehtat* Mt. 23, 34  
*gefylga*  
*gefylged* Mt. 20, 29. Mk. I 2, 17  
*āhēna* ‘humble’  
*ahēned* L. 21, 24  
*geceiga ceīga* ‘to call’ -de, PP -ed 1  
*geceiged* (27 times); *geciged* J. 1, 42;  
*geceged* L. 1 10, 11; *gecegid* L. 19, 13  
*āsenda*  
*asended* L. 4, 26; *asendet* J. 1, 24. 9,7  
*gelæra* ‘to teach’  
*gelæred* Mt. 1 10, 13. 2, 22. 13, 52.  
28, 15. L. 1, 4; *gelaered* Mt. I 1, 6  
*senda*  
*sended* Mt 1 5, 13; *sendet* L. 1, 19  
*foregelæra*  
*f’egelæred* Mt. 14, 8  
*bebyrga* ‘bury’  
*bebyrged* L. 16, 22  
*bēga* ‘bow’

*begeg* Mk. 10, 17

*belyrta* ‘to deceive’  
*bilyrtet* Mt. 2, 16

*besenca* ‘to sink’  
*besenced* Mt. 13, 6

*betȳna* ‘to enclose’  
*betyned* L. 4, 25; *bityn’* J. 20, 19  
(abbrev.)

*getȳna*  
*getyned* Mt 25, 10

*untȳna*  
*untyned* (8 times); *untuned* Mt. I 4, 4;  
*untvned* J. 1, 51

*dōema* ‘judge’  
*domad* Mt. 10, 34

*gedōema* wv.  
*gedoemed* Mt. I 1, 5, 7, 1, 7.2. L.6,37.  
J.3, 18 ( 2). 16,11

*eftāwāelta* ‘roll’  
*efetawaelted* Mk. 16, 4

*eftgebōeta* ‘repent’  
*eftgeboetad* Mk. 3, 5. J. 3,4

*tōgebōeta*  
*togeboetad* L. 22, 55

*forberna* ‘burn’  
*f’berned* Mt. 13, 6. 13, 40

*forcȳða* ‘to tell’  
*f’cyðed* Mt. I 15, 2, I 15, 3. Mk. I 1,20

*gecȳða*  
*gecyðed* L. 6, 44. 16, 28. J. I 1, 7. I 6,  
19

*forswīðed* ‘overcome’  
*f’suiðed* Mt. I 20, 20

*fromāwāelta* ‘roll’  
*frōawāelted* L. 24, 2

*gebēga* ‘bow’ Class 1  
*gebegeg* Mt. 23, 12. 27, 29, L. 3, 5.  
12, 50. 13,11. 18,14

*gebismeriga* ‘mock’ (traces of Class 3)  
*gebismered* L. 18, 32

*gebōeta* ‘repent’  
*gebōetad* L. 23, 16; *geboetat* Mt. I 2,  
17

*gebrāda* ‘broaden’  
*gebræded* J. 19, 13

*gecāelca*  
*gecælcad* Mt 23, 27

*geclāða* ‘to clothe’  
*gecladed* Mk. 5, 15

*gedærsta* ‘fermented’  
*gedærsted* Mt. 13,33. L. 13,21

*gedīða* ‘to put to death’  
*gededēd* Mk. 7, 10. L. 23, 32; *gededēd*  
J. 12, 33

*gedrenca* ‘drench’  
*gedrencgad* L. 10, 15

*ofgedrenca* ‘overdrench’  
*ofgedrenced* Mt. 18, 6

*gedroēfa* ‘disturb’  
*gedroefed* Mt 2, 3. J. 12, 27. 14, 1;  
*gedroefad* L. 1,29

*gedrȳga* ‘to dry’  
*gedrugad* Mt 21,19. Mk. 5,29

*gedrysn(i)a* ‘quench’  
*gedrysned* Mk. 9, 44. 9,48. L. I 3,4

*geēca* ‘to increase’  
*geeced* Mt I 2, 15. Mk. 4,24; *geecad*

Mt I 2, 3

*gefoēda* ‘feed’  
*gefoeded* L. 4, 16

*gefroēfra* ‘soothe’  
*gefroefred* Mt. 5,4. L. 16, 25

*gegroēta* ‘attack’  
*gegroeted* L. I 3, 15

*gegyrda* ‘bind’  
*geryded* J. 13, 5

*ymbgyrda* ‘bind’  
*ymbgyrded* Mk. 14, 51

*gehæla* ‘to heal’  
*gehæled* Mt. I 18,3. 8, 13. 15, 28. Mk. I 2, 19. 5, 28. 5,29. L. I 4, 17. I 5,6. 8,2. 8,47. 13,23. J.I 5, 19. 3,17. 5,10. 10, 9; *gehaeled* Mt. I 19, 19. 8, 8. J. I 4, 6

*gehēna* ‘to humble’  
*gehened* Mk. 16, 16; *gehēned* Mk. 9, 12

*gehēra* ‘to hear’  
*gehered* Mt I 6,12. I 7,12. 6,7. 15,12. 19,25.28,14. Mk. 11,18. L. 110,5. 1,13. 20, 16. 20,45. J. 9,32; *gehēred* Mk. 2, 1; *geheræd* Mt. 2, 18

*gehrīna* ‘sieze’ (weak in North.)  
*gehrinad* Mt. 14, 36; *gehrinad* Mt. 12, 44; *gehrined* L. 21, 5

*gehwerfa* ‘turn’  
*gehwerfad* Mk. 4, 12

*gehȳda* ‘hide’  
*gehyded* L. 8, 17. 12, 2. 14, 34. 19, 42; *gehȳded* Mt. 10,26

*geinlīhta* ‘enlighten’  
*geinlihted* Mt. I 21, 2

*inlihta*  
*inlichtet* J. I 6, 2; *inlihteð* Mk. I 4,16

*gelæda* ‘bring’  
*gelæded* Mt. 4, 1. 10, 18. L. 16, 22; *gelædet* L. 23, 32; *gelaeded* Mt. I 2, 10; *gelæded* L. 21, 24

*efnegelæda* ‘bring again’  
*efnegelæded* Mt. I 2, 16

*tōgelæda*  
*togelaeded* J. I 5, 9

*oferlæda*  
*oferlæded* Mt. I 2, 15

*gelēfa* ‘to entrust’  
*gelefed* Mt. 12, 2. 12, 4. 12, 10. 12, 12. 14, 4. 14, 23. Mk. 6, 18. 10, 2. 12, 14. L. 6, 4. 13, 14. 14, 3. J. 5, 10

*gelīora* ‘to depart’  
*geliorred* Mt 9, 18; *geliorad* L. 21, 33; *gehliored* Mk. 13, 31

*gemenga* ‘to mingle’  
*gemenced* Mt. 27, 34; *gimencged* Mt. I 3, 9

*gemoēta* ‘meet’  
*gemoeted* L. 15, 24. J. I 4, 17; *gemoetad* L. 9, 36. 15,32. 24,23; *gemoetet* L. 17,18; *gemoetat* Mk. 4, 19; *gimoetid* Mt. I 3, 9

*genēda* ‘compel’  
*geneded* Mt. I. 6 18. I 17,2. L.14,8

*genemna* ‘to name’  
*genemned* Mt. 9, 9. (9 more). Mk. (5 times). L. (5 times). J. (4 times) ; *genem* (abrv.) J. 11.54 (abrv. form not counted)

*nemna*  
*nemned* Mk. 7, 26

*geonwālda*  
*geonwældad* L. 22, 25

*gerēda* ‘gather’  
*gereded* L. I 11, 16. I 11, 17.

*gerihta* ‘to correct’  
*gerehtad* L. 13, 13; *girihtad* Mt. I 2, 17

*gesāelta* ‘to salt’  
*gesælted* Mt. 5, 13

*gescirpa* ‘equip’  
*gescirped* Mt. 11, 8

*unscirped*  
*unscirped* Mt. 22, 11

*gescyrta* ‘shorten’  
*gescyrted* Mt. 24, 22(2)

*gesenda* ‘send’  
*gesended* Mt.(10times). Mk. I 1,10. 9,42. L. (8 times). J. (4 times):  
*gæsended* L. 1,26; *gesendet* Mt. 23, 37. J. I 3, 5. 1, 6. 3,24. 3,28; *gesendad* Mt. 5, 29. L. 13, 34. 23,25; *gesendat* L. 19, 32

*gespēafta* ‘spit’  
*gespeoftad* L. 18,32

*gestrenga* ‘withhold’  
*gestrenced* L. 1, 80; *gestrencgid* L. 2,40

*geswīga* ‘to be silent’  
*gesuiged* L. I 11, 10

*geswinga* ‘to beat’ (weak in Lind)  
*gesuincged* L. 18, 32; *gesuuinged* Mk. 13, 9

*geswoenca* ‘harrass’  
*geswoenced* Mk. 1, 34

*getēla* ‘accuse’

*geted* Mt. I. 22.1,12,37; Mk. 9, 12. 14,60; *geteled* Mt. 22, 6. L. 18, 32

*getimbra* ‘build’  
*getimbred* L. 4,29. J. 2, 20

*geðringa* ‘to crowd’  
*geðringed* L. 8, 42

*forswiðed* ‘overcome’  
*f’suiðed* Mt. I. 20.20

*oferswīða*  
*of’suiðed* Mt. I 16, 14; *of’suiðet* L. I 4, 11; *of’swided* Mt. I 16,8

*gewoenda* ‘turn’  
*gewoendet* L. 17, 4

*gewoesta* ‘to lay waste’  
*gewoested* Mt. 12, 25

*gewrynda* ‘to found’  
*gewrynded* Mt. 7, 25

*ofergelāfa* ‘to leave over’  
*of’gelāfed* Mk. 8, 8

*ofergylða* ‘guild/ornament’  
*of’gylðed* J. P. 188.5

*tōdāla* ‘divide’  
*todæled* Mt. I 4, 6. 12, 25 (2). 12, 26. Mk. 3, 24. 14,24. L. 17,14. 11,17. 11,18. 12,52. 12,53

*tōgeēca* ‘to increase’  
*tōgeēced* Mt. 6,33; *togeēced* L. 12,31

*tōrenda* ‘to tear in pieces’  
*toreded* Mk. 15, 38

*ðerhgelēfa* ‘trust’  
*ðerhgelefed* L. I 2, 16

*unceaped* ‘given without payment’  
*unceaped* Mt. 10. 8; *unceap . . .* Mt. 10, 8 mg. (abrv. form not counted)

*underbēga* ‘bowed under’  
*underbegeð* Mt I 3, 11

*underðioda* ‘join together’  
pp.*underðioded* L. 2, 51 10, 17. 10,20;  
*vnderðiodid* Mt.13,12

*unascended* ‘unharmd’  
nsm. *unascended* J. I 1, 12

*unāwoerded* ‘unruined’

---

Heavy uninflected PP  
Unsyncopated: x365  
(including x113 dental final  
stems)  
Syncopated: x9 (*cēigan*)

Within these, no *timbran*  
types were syncopated,  
and there were no  
epenthesis *timbran*  
types.

---

### *Underlying geminates (heavy forms)*

*ungewoemmed* ‘to spoil’  
nsm. *ungewæmmed* J. I 1,6,  
nsm.*unauæmmed* J. I 1, 12

*ācenna* ‘create’  
*acenned* Mt. 1, 20. L. I 3, 14. I 3, 16.  
J. 9, 34; *accenned* Mt. 2, 2. 2,4. 21,19.  
26,24. L. I 3, 13. I 3, 14. 1, 35. 2,6. 2,  
11. J. 3, 3. 3, 4(2). 3, 6(2). 3, 8. 9, 2.  
9,19. 9,20. 16,21(2). 18,37

*eftācenna*  
*eftaccenned* J. I 3, 4

*gecenna*  
*gecenned* Mt.I 14,11. I 15,1. I 16,3.  
1,16. 2,1. J. 8, 41; *gecened* J. 1, 13

nsm. *unauwerded* J. I 1, 12

*unbȳed* ‘to dwell’  
nsm. *unbyed* Mt. 23, 38. Mk. 6, 35;  
*unbyed* Mt. 14, 13; *unbyid* Mt. I 19,  
19

*gedēgla* ‘to hide’  
*gedeglad* L 18,34; *gedegled* Mt. I. 7.8,  
10, 26(2) Mk. 4,22. L. 12,2

*efnegeccerra*  
*efnegeccerred* L. 22, 61. 23, 28

*eftgeccerra* ‘return’  
*eftgeccerred* L. I 3, 16

*fromymbcerra*  
*frōymbcerfed* Mt I 9, 15

*geccerra*  
*geccerred* Mt. I 2, 5. 18, 3. 21, 29. Mk.  
3, 21. 4, 12. L. 7, 13. 7,24. 10,33. 17,4.  
22,32. J. 7,53. 16,20; *geccerred* Mk. I  
1, 6

*ofācerra* ‘turn’  
*ofaccerred* L. I 10,4



*ymbcerra*

*ymbcerred* Mt. 1 2, 3. J. 20, 14.

*ācwoella* ‘kill’

*acwelled* Mt 15,4

*gefylla* ‘to fill’

*gefylled* Mt. (22 times). Mk. (5 times).

L. (21 times). J. (12 times); *gifyllid* J.

19,28. 19, 30; *gifillid* J. 19,28

*tōgefylla*

*togefylled* Mt. 13, 35

*efnegecwoecciga* ‘to shake’

*efnegequoeccad* L. 20, 18

*gefālla* (strong Class VII, but declines weak here)

*gefællid* L. 20, 18

*gespilla* ‘to destroy’

*gespilled* Mt. 6, 19

*geyppa* ‘bring forth’

*geypped* L. 12, 2

---

Heavy uninflected gem. PP  
x125

Within these, no *timbran* types  
were syncopated, and there were  
no epenthesised *timbran* types

---

## *(C2.2) Class 2 uninflected past participles*

### *(C2.2.1) Class 2 light uninflected*

*bodiga* ‘announce’

*bodad* Mt. 26, 13

*gelufiga* ‘to love’

*gelufad* Mk. 12, 33

*gecliopiga*

*gecliopad* Mk. 8, 34

*geplontiga* ‘plant’

*geplontad* L. 13, 6

*getaliga* ‘tell’

*getalad* Mt. 10,30. L. 12, 7; *getaled*

Mk. 15,28. J. 6, 10

*gelaðiga* ‘invite’

*gehlaðad* Mt. 22.3, L. 14, 8; *gehlaðed*

L. 14, 8; *gelaðad* J. 1 1, *gelaðat* Mt.

21, 11

*tōgelaðiga*

*togehlðad* Mt. 22, 8

*geðrowiga* ‘suffer’

*geðroued* Mt. 17, 12; *geðroued* Mt. 1

14, 11; *geðrouad* L. 16, 25

---

Light uninflected Class 2  
PP  
x17

---

(C2.2.2.) *Class 2 heavy uninflected*

*gedæfna* ‘become’ Class 2

*gedæfnad* Mt. 3, 15. J. 1 2, 4. 4, 20. 4, 24; *gedæfned* L. 19, 5. 21, 9. 24, 7. J. 13,14; *gedæfnad* J. 3, 14.

*geēcniġa*

*geecnad* L. 2,21

*geednīwiga* ‘restore’

*geedniuađ* Mt 12, 13

*ðerhgeendiga* ‘end’

*ðerhgeendad* L. 1, 45

*geendiga*

*geendad* Mt. I 7, 4. I 19, 2. 8, 17. 22, 10. L.1 3,4.I 11,16. 2,21.4,2. 4,13. 12, 50. 13,32. 18,31. J. 19,30; *geendat* L. 22, 22. J. 19, 28

*gewōeda* ‘to dress’

*gewoedad* L. 12, 27; *geweded* Mt. 11, 8. L. 8,35

*unwōeded* ‘unclothed’

pp.*unweded* Mt. 22, 11

*gewoeddiga* ‘bethroth’

*gewoedded* L. 1, 27

*biweddiga* ‘to betroth’

*biwoedded* Mt. 1, 18

*gefōtiga* ‘footed’

*gefotad* Mk. 15, 44

*gemānsumiga* ‘marry’

*gemānsuad* Mk. 12, 15

*undermerciga* ‘mark out’

*undermercad* Mt I 9, 19

*ofergemerciga*

*ofergemercad* Mt. I 20, 7

*gepīniga* ‘torment’

*gepined* L. I 9, 4

*gegerliga* [internal *ge*] ‘clothe’

*gegerelad* Mk. 1,6. 5,15.

*gescēada* (weak form, also some strong forms, listed separately). ‘remove from association’

*gesceadad* Mt. 14, 21, *tosceaded* L. I 4, 9

*geðiostriga* ‘to dim’

*geðiostrad* Mk 13.24, of *geðiostrad* Mt 24, 29

*foregeðiostriga*

*f’egeðistrat* Mk. 6, 52

*gewīdliga* ‘defile/pollute’

*gewidlæd* J. 18,28

*gewintriga* ‘to age’

*geuintrad* J. 21, 18

*mēgwlitiga* ‘to shape’

*megwlitgad* Mt. 17, 2

*ofāwyrtrumiga* ‘to root’

*ofawyrtrumad* Mt. 15, 13

*oferhīwiga* ‘transfigure’

*of’hiwade* Mk. I 4, 4; *of’hiuade* L. I 6,8; *of’hiuad* Mt 17,2; *of’hiued* Mk. 9, 2

*temesiga* ‘sift’

*temised* Mk. 2, 26

*unrōtsiga* ‘to be sad’

*unrodsad* Mk. 6, 50

*geyfliga* ‘to injure’

*geyflad* Mt 22, 6.

*gegeadriga* ‘connect’  
*gegeadrad* Mt. 1 10, 3; *gegeadred* L. I 4, 10

*gehorwiga* ‘to defile’  
*gehoræd* L. 18, 32

*geðrēatiga* ‘force away’  
*geðreatad* Mt. I 6, 18. L.I 6, 9  
*geðreatad* Mk. I 4, 2

*gelo:siga* ‘to lose’  
*gelosad* Mt 8, 25

*āfyrhtiga* ‘frighten’  
*afryhtad* L. 8, 23; *afyrhtad* L. 12, 4

*āwuldriga* ‘glorify’  
*auuldrad* J. 12, 16

*gewuldriga*  
*geuuldrad* J. 7, 39; *geuuldred* J. 11, 4. 12,23. 14, 13; *giuuldrad* J. 21,19

*āwundriga* ‘wonder at’  
*awundrad* Mk. 15,5. L. 8, 25; *aundrad* L. 7, 9

*gewundriga*  
*gewundrad* Mt. 8, 10. 9,33. Mk.6,6. 11,18

*befæstniga* ‘secure’  
*befeastnad* Mt. 1, 18.

*fæstniga*  
*fæstnad* L. 1, 27

*gefæstniga*  
*gefæstnad* L. I 10, 12. 16, 26.

*eftigenīwiga* ‘renew’ (w stem)  
*eftigeniuad* L. 6, 10.

*eftnīwiga*  
*eftniuad* Mk. 8, 25.

*foregenotiga* ‘to use’ [internal *ge-*]  
*fegenotad* Mt. I 10, 1

*geārðiga* ‘to dwell’  
*gearðad* Mt. 6, 2.

*geāsciga* ‘learn’ Class 2 heavy  
*geascad* Mt. 10, 26.

*geberhtniga* ‘glorify’  
*geberehtnad* J. 13,31. 15,8;  
*geberhtnad* J. 13, 31. 13, 32. 17, 10;  
*gebrehntnad* J. 21, 19.

*gebiseniga* ‘to set an example’  
*gebisened* L. I 6, 20

*gebloēdsiga* ‘hallow’  
*gebloedsad* (9 times); *gebleodsad* Mt. 21, 9; *gebledsad* Mt. 23, 39. J. 12, 13

*gecēapiga* ‘bargain’  
*geceopad* L. 19, 15

*geclānsiga* ‘cleanse’  
*geclænsad* (10 times); *geclaensad* Mt. 11, 5; *geclænsed* L. I 4, 19

*gecostiga* ‘tempt’  
*gecostad* Mt 4,1. L. 4, 13. 12, 56;  
*gecosted* Mt. 8,6. L. 4, 2. 6, 18;  
*gecostað* Mk. 9,49

*geefniga* ‘even’  
*geefned* Mt. 7, 24

*gefrīga* ‘embrace’  
*gefriod* J. 8,33; *gefreod* L. I 8, 9. 12,58; *gefreouad* L. 1, 74; *gefriað* Mk. I 4,7

*gefulwiga* ‘baptise’  
*gefulwuad* Mk. 7,4. 10,38. 10,39 (2);  
*gefuluwad* L. 12, 50; *gefuluad* J. 3, 23;  
*gefulwad* Mt. 3, 6. 3, 13. 3,16. Mk. 12,9. 1,5. 1,9. L. 7,29. 7,30. 11,38;  
*gefuluad* Mk. 16, 16. L. 3, 7. 3, 12. 3,

21 (2); *gefuulwad* L. I 4, 8.

*gefyrhtiga* ‘frighten’  
*gefyrhtað* Mk. 9, 6

*gegearwiga* ‘prepare’  
*gegearwuad* Mt. 22, 8; *gegearuad* Mt. 11, 8. Mk. 6, 9. 10, 40. 14, 51. L. I 11, 17. 7,25. 8,27. 12,22. 12, 27. 14, 17. 16, 19. 23, 11. 24, 49; *gegearued* Mt. 6, 29; *gegearwad* Mt. 20,23; *gegerwad* Mt. 22, 4; *gegearwað* Mt. 25, 34.

*ymbgearwiga*  
*ymbgearuad* Mk. 16, 5

*foregegearwiga* ‘prepare’  
*t’egegearuuad* Mt. 25,42;  
*f’egegearuad* L. 6, 4

*gegēma* wv ‘to heal’  
*gegemed* L. I 4, 19

*gehālgiga* ‘hallow’  
*gehalgad* Mt. 6,9. L. 11,2. J. 17,19

*gehaðriga* ‘to restrain’  
*gehaðrad* L. 12, 50

*gelēcniga* ‘to cure’  
*gelecnad* L. 6, 18; *gelecued* L. 5, 15. 8, 43

*gelīciga* ‘to please’  
*gelīcad* Mk. I 4, 15, *geliced* Mt. 7, 24

*tōgeliciga*  
*togelīcad* Mt. 18, 23.

*gemerciga* ‘to mark out’  
*gemercad* Mt. I 4, 8. L. 2, 1.

*gemērsiga* ‘to glorify’  
*gemersad* Mt. I 22, 8. 28, 15. L. I 11, 3. 1, 65. 4, 37. 16, 1. 16, 16

*gemicliga* ‘to enlarge’  
*gemiclad* L. 4, 15

*gemonigfāldiga* ‘to multiply’  
*gemonigfalded* Mt. I 20, 4

*gemyndgiga* ‘remember’  
*gemyndgad* Mt. I 19,2. L. 1,54;  
*gemyndged* L. I 3, 13

*genægliga* ‘nail’ Class 2  
*genæglad* Mt.27,22; *genægled* Mt. 27, 26

*geniðriga* ‘to subdue’ Class 2 (-ode, -ade in BT, but one -ede here also)  
*geniðrad* Mt. 12, 37. 27, 3. 27, 12. Mk. 9,12. 16,16. J. 15, 9; *gehniðrad* L. 6, 37. 14,11. 21,24.

*geondspurniga* ‘tempt’  
*geondspurnad* Mt. 13, 21. 24, 10. Mk. 4,17. L. 7,23; *geondspyrnad* Mt. 26, 33. Mk. 14, 27. 14, 29; *geondspyrned* Mk. 6, 3

*gerēafiga* ‘to steal’  
*gehreafad* L. I 4, 20.

*geriordiga* ‘to take food’  
*gehriorded* L. 6, 21. 15, 29;  
*gebriordad* Mt. I 19, 15. L. 15, 23;  
*geriordad* Mt. 14, 20; *geriorded* Mt. 5,6

*gesāweliga*  
*gesaweled* Mk. I 1, 11

*gesigfæstniga* ‘triumph’ *gesigfæstnad* J. I 8, 12.

*gesomniga* ‘assemble’  
*gesomnad* Mt. 13, 2. 13, 40. 18, 20. 22, 41.24,28. 24,31. 25,32. 26,3. 28, 12. Mk. 1, 33. 4, 1. L. 17,37

*gesōðfæstiga* ‘justify’  
*gesoðfæstad* Mt. 11, 19. 12, 57, L. 7,35. 18,14.

*getemesiga* ‘to sift’

*getemesed* L. 6, 4

*getrahtiga* ‘treat’

*getrahtad* Mk. 5,41. J. 1,38. 1,42;

*getrachtad* J. 1,41; *getrahted* Mk. 15, 22. 15,34; *getrahtet* Mt. 1, 23;

*getractat* J. 9, 7

*geunrōtsiga* ‘offend’

*gewunrotsad* L. 18, 23; *geunrodsad* Mk. 10, 22

*gewelgiga* ‘to enrich’

*gewelgad* Mt. 25, 9

*geworðiga* ‘to value’

*geworðad* J. I 6, 2

*geārwyrdiga*

*gearwyrðed* L. 6, 34

*lōsiga* ‘lose’

*lōsad* Mk. I 2, 1; *losad* Mk. I 1, 13 L. 19, 10

*ācunniga* ‘to try’

*acunnad* Mk. 1, 13

*forcunniga*

*f’cunned* Mt. I 15,2

*gecunniga*

*gecunned* Mt. I 21, 12. 4, 1. 8,6

---

Heavy uninflected Class 2

PP

x266 (no sync.)

---

### (C2.3) *Inflected past participles*

#### (C2.3.1) Light Inflected Class 1 Weak Past participles

##### (a) excl. *t/d* forms

*geberiga* ‘to happen’

nom.pl.masc. *geberede* Mt. 9, 36

nom.pl.masc. *gestyredo* L. 24, 38

nom.pl.neut. *gestyredo* L. 21, 26

*efnegestyriga*

nom.pl.masc. *efnegestyredo* L. 24, 37

*getrymma* ‘to strengthen’

gs. *getrymmedes* J. 4, 39

*gestyriga* ‘to excite’

acc.sg.fem. *gestyredo* J.I 6, 17

##### (b) *t/d* forms

*āsetta* ‘set’

nom.pl.fem. *asettedo* J. 21,9;

acc.pl.neut. *asetedo* J. 20, 6

*efnegesetta*

nom.sg.fem. *efnegesettedo* J. 5, 13.

acc.pl.masc. *togesetedo* Mt. I 10, 3.

*gesetta*

nom.pl.fem. *gesettedo* J. 2, 6,  
acc.pl.neut. *gesettedo* L. 12, 19, 24, 12.  
J. 20, 5 ; *gesattedo* J. 20, 6

*foreondeta*

f'eondete L. 2, 5

*tōgesetta*

---

x10 t/d no syncope  
x6 lights excluding t/d

---

<i>Li.</i> light past participle inflected forms in <i>-ed</i>	Total	Number syncopated	Syncope by root-final consonant	% syncopated
Class 1	16	0	10 forms in <i>t/d</i> , no syncope.	0

<i>Li.</i> heavy past participle inflected forms in <i>-ed</i>	Total	Number syncopated	Behaviour of <i>t/d</i> forms	% syncopated
Class 1	85	50	Total: 9 Sync: 4	59%

### (C2.3.2) Heavy inflected Class 1 forms in *-ed*

#### (a) Syncopated forms:

*efnegeceiga* 'to call'

nom.pl.masc. *efnegeceigdo* Mk. 3, 23;  
dat.pl.masc. *efnegeceigdum* Mk. 8, 1;  
*efnegeceigdū* L. 23, 13

15

*gebēga* 'bow'

dat.sg.neut. *gebegdum* J. 19, 30

*geceiga*

nom.pl.masc. *geceigdo* Mt. 20, 16, 22,  
14; *geceigde* Mt. 23, 10; *geceigd* Mt.  
10, 1

*gedāla* 'divide'

nom.pl.neut. *gedaelde* J. 19, 24

*gehāla* 'to heal'

nom.pl.masc. *gehældo* L. 6, 17

*eftonfōa*

acc.sg.masc. *eftondfoende* Mt. I 18,

*gehwērfa* 'turn'

nom.pl.masc. **gehuerfde** Mt. 13, 15  
nom.pl.neut. **gihwerfde** Mt. I 2, 2. I 2,  
3

gescrinca ‘shrink’ (strong in some  
texts)  
nom.pl.masc. **gescrencde** Mt. 13,6.  
(note the CC.CV cluster)

tȳna ‘enclose’  
nom.pl.fem. **tyndo** J. I 8, 5. 20, 19.

untȳna  
nom.pl.masc. **untynde** J. 9, 10;  
**untuende** Mt. 27, 52;  
nom.pl.neut. **untynndo** Mk. 7, 35. L.  
24, 31; **ūntynde** Mt. 9,30; **untynde**  
Mt. 20, 33;  
acc.pl.masc. **untynndo** Mk. 1,10.

betȳna

### (b) Syncopated Dental

efneāwoenda ‘turn’  
**efneawennde** L. 14, 25

lāeda ‘lead’  
**læde** Mt. 22, 25

āsenda ‘send’  
nom.pl.masc. **asende** Mt 26,47.

dat.pl.fem. **bityndU** J. 20, 26

harmcwoeða  
dat.pl.masc. **harmcuedū** L. 6, 28

geswoenca ‘harrass’  
nom.pl.masc. **gesuoencde** Mk. 1, 34

underdrenca ‘drench’  
nom.pl.masc. **underdrencdo** Mk. 5, 13

yfelwyrcente  
dat. **yfelwyrcentum** Mt. 9, 11

gefylga ‘follow’  
nom.pl.masc. **gefyl’de** L. 5, 11  
**welfremmende** ‘beneficent’  
nom.pl.masc. **welfremmende** L. 22, 25.  
(though the verb is a light *fremman*  
type, it retains *n*, becoming heavy)

gewoenda ‘turn’  
nom.pl.masc. **gewoendo** Mt. 7,6

eftāwoenda ‘turn again’ Class 1 dental  
**eftawoende** L. 8, 55.

---

x35 syncopated heavy Class 1 weak  
inflected forms, including x5 *t/d*  
final forms

---

### (c) Unsyncopated forms in *t/d*

brēda ‘broaden’  
gsm, **brededes** L. I 11,14

**foregegyrda** ‘bind’

nom.pl.masc. *f'egegyrdedo* L. 12, 34

*ymbgyrda*

acc.pl.masc. *ymbgyrdeno* L. I 7, 17

*gebrēda*

gen.sg.masc. *gebrededes* L. 24, 42

*efigeboēta* 'to repent'

nom.pl.neut. *efigeboetat* Mt. I 2, 2

*gerihtā* 'to correct'

nom.pl.neut. (inf.?) *girihtæ* Mt. I 2, 2.

(not counted, as Cook questions whether the form is an infinitive)

---

x5 unsyncopated heavy  
Class 1 weak inflected *t/d*  
final forms

---

#### (d) Unsyncopated forms not in *t/d*

*gecēiga* 'to call'

nom.pl.masc. *geceigedo* L. 14, 24, 16,5

*ærgelāra* 'teach'

nom.sg.fem. *aergelered* Mt. 14,8

(apocope)

*āwoērga* 'to curse'

nom.pl.masc. *awoergedo* Mt. 25,41;

*auoergado* J.7,49

*gedoēma* 'judge'

acc.sg.fem. *gedoemedo* J. I 5, 9

*gedroēfa* 'disturb' Class 1

nom.pl.masc. *gedroefed* Mt 14, 26;

*gedroefedo* J. I 6, 1.

*gedrysn(i)a* 'quench'

nom.pl.neut. *gedrysned* Mt 25, 8.

(apocope)

*gefylga* 'follow'

nom.pl.masc. *gefylgede* Mt. 12, 15

*genemna* 'name'

acc.pl.masc. *genemnedo* Mt I 2, 12

*timbra* 'build'

gsn. *timbredes* J. I 6, 5

*gedēgla* 'hide'

nprn *gedegledo* L. 19, 42

*tōgedēgla*

dat.sg.neut. *togedeglede* Mt. 1 3, 44

*unbyēd* 'dwell'

dat.sg.neut. *unbyedu* Mt. I 7, 12.

---

x15 unsyncopated heavy  
Class 1 weak inflected  
forms, excluding *t/d* final  
forms

---



### (C2.3.3) Heavy geminates

*gemerra* ‘hinder’

nom.pl.masc. *gernerredo* L. I 2, 11

*ācenna* ‘bring forth’

nom.pl.neut. *acen* (abbrev. mark) Mt. I 2 15 (not counted). 24, 32; *acenda* Mk. 13, 28

*frumcenned* ‘first-born’

acc.sg.masc. *frumcende* Mt. 1, 25;

*frucende* L. 2, 7

*frumcenned* ‘first-born’

asm *frumcende* Mt. 1.25, *frūcende* L. 2.7

*eftcerra* ‘turn’

nom.pl.masc. *eftcerde* L. 2, 20

*gecerra*

nom.pl.masc. *gecearredo* J. 7,53;

*gecerredo* J. I 1,10. 12,40; *gecerdo*

Mt. 7,6; *gecerde* L. 2, 45

*gecwoella* ‘to kill’

nom.pl.masc. *gecuelledo* L. 23,32

*gefylla* ‘fill’

asn. *gefylede* L. I 4, 12;

nom.pl.masc. *gefyllde* Mt 15, 37. J. 6,

11; *gefylde* Mt. 1 19,

15. Mk.6,42. 8,8. L.I 5, 4. 1,23. 9,17;

*gefylledo* L. 21, 22;

nom.pl.neut. *gefylde* L. I 4, 18;

*gefylledo* L. I 2, 14. 22, 16. 24, 44. J.

12, 38

*unāwoemmed* ‘spoil’

nom.pl.masc. *unawoemdo* Mt. 19, 12.

*onginna* ‘begin’

nom.pl.neut. *ongindo* L. I 2. 14

*yfelwyrcente* ‘wicked’

Mt 6, 23. 13,38;

32 total (not including the sellan type)

---

x32 heavy Class 1 weak  
inflected geminate forms,  
x16 of which syncopated

---

*sellan type*:

*gesella* ‘give’

nom.pl.neut. *gesald* Mt. 11, 27.

<i>Li.</i> heavy past participle inflected forms in <i>-ed</i>	Total	Number syncopated	Behaviour of <i>t/d</i> forms	% syncopated
Class 1	87	50	Total: 10 Sync: 5	50%

(C2.3.3) *Light inflected Class 2.*

unhiwed ‘discolour’  
acc.sg.fem. *unhiwed* Mt. I 4, 3

*nacediga* ‘to make naked’  
dat.sg.masc. *nacode* L. I 5, 8

*āhefgia* ‘to weigh down’  
nom.pl.masc. *āhefigad* L.21,34; *āhefgade* Mt.26,43

*gehefgiga*  
nom.pl.masc. *gehefigad* L. 9, 32

(C2.3.4) Class 2 heavy inflected past participles

*gewōerged* ‘weary’  
(pp.) gpm. *gewergedra* Mt. I 1, 11.

*gehlīoniga* ‘to recline’  
nom.pl.masc. *gehliouad* Mt. 14, 9  
(apocope)

*gesomniga* ‘assemble’  
nom.pl.masc. *gesomnade* Mt. 26. 57  
dpn. *gesomnadum* J. I 2, 5  
acc.pl.masc. *gesomnado* L. 24, 33

*ingefulwiga* ‘baptise’  
nom.pl.masc. *īgefulwuade* Mk. 10, 38

*ðerhgēlīciga*  
acc.pl.masc. *ðerhgelicade* L. I 10, 2

*geondspurniga* ‘tempt’  
nom.pl.masc. *geondspurnedo* Mt. 13,  
57 *geondspyrede* Mt. 15, 12

*getemesiga* ‘sift’  
acc.pl.masc. *getemeseda* Mt. 12, 4

*gefyrhtiga* ‘frighten’  
nom.pl.masc. *gefyrhtedo* L. 24, 37

*unhīwed* ‘discolor’ (w stem)  
acc.sg.fem. *imhiwed* Mt. I 4, 3.

*oferhīwiga* ‘paint over’  
dat.pl. *of’hiudu* (*abbrev.*) Mt 23, 27

*āwundriga* ‘to make a wonder of’  
nom.pl.masc. *awundrade* L. 2, 18. 2,  
48

nom.pl.fem. *awundrade* L. 11, 14

*geendiga* ‘end’

nom.pl.masc. *geendade* L. 2,43;

*geendado* J. 17, 23

nom.pl.neut. *geendado* Mk. 13, 4;

*geendedad* (wk.) Mk. 1 1,18.

*efneunrōtsiga* ‘offend’

nom.pl.masc. *efneunrotsade* Mt. 17, 23

*geunrōtsiga*

nom.pl.masc. *geunrotsade* J. 16, 20

*geunrōtsade* Mt. 26, 22

*unrōtsiga*

nom.pl.masc. *unrotsade* Mt. 18, 31.

*gewundriga* ‘wonder’

nom.pl.masc. *gewundrade* Mt. 21, 20.

Mk. 6, 2; *geuundrade* Mt. 7, 28

*gesparriga* ‘bolt’

dat.sg.neut. *gesparrado* Mt. 6, 6

*gewo:erged* ‘weary’

(pp.) gpm. *gewergedra* Mt. I 1, 11.

*gecunniga* ‘try’

nom.pl.masc. *gecunnate* Mt. 15, 2;

*gecunnad* Mt. I 5, 9

---

Total: 31

*no syncope*

*- appears to be a few cases*

*of final –e deletion*

*(underlined)*

---

## (C2.4) Strong Past Participles in -en

### (C2.4.1) Inflected strong -en forms in Li

#### (C2.4.1.1) Light forms

##### (a) Root-final stops

###### (a<sup>1</sup>) [k]+-en

*tōbreca* ‘to use’  
*tobrocene* J. 13, 26

*gebreca*  
acc.pl.masc. *gebroceno* L. 4, 18

*tōbreca*  
nom.pl.masc. *tobroceeno* J. 19, 31

Syncope afer [k]: 0/3

###### (a<sup>2</sup>) [d]+-en

*ācwoeða*  
dat.sg.masc. *acwoedni* Mt. 26,30

*forcwoeða* ‘to speak’  
*f’cuoedne* J. I 7, 13

*cwoeða*  
acc.sg.masc. *cwoedne* Mk. 14, 58  
dpn. *cuoednu* (abbrev.) Mk. 14, 26

*forcwoeða*  
nom.pl.neut. *f’cuodeno* J. 3, 20

*gecwoeða*  
dat.sg.masc. *gecuedne* J. I 1, 13  
nom.pl.neut. *gecwoedno* L. 19,28  
acc.pl.neut. *gecwoedna* Mk. I 2, 3

*wiðercwoeða*  
as. *wiðercwedna* Mt. I 20, 4

*bebēada* ‘to command’

nom.pl.neut. *bebodeno* L. 17, 10

*forbēada*  
*ns. f’boden* L.I 4, 17; *f’bodeno* L.I 5, 2.

Syncope afer [d]: 8/11

###### (a<sup>3</sup>) [t]+-en

*gesetta*<sup>78</sup> ‘to set’  
*geseteno* L. I 9, 6;  
dpn. *gesetn* U L. 22, 41;

*foresitta* ‘to sit’  
acc.pl.neut. *f’esetna* Mt. 1 19, 12  
nom.pl.masc. *f’esetne* Mt. 12, 4

*insetta*  
nom.sg.fem. *insetena* Mt. I 9, 13  
acc.pl.masc. *inseteno* L. I 6, 2

*forgeatta* ‘to forget’  
nom.pl.masc. *f’getne* Mk. 8, 14

*begeatta* ‘to obtain’  
*begetne* L. I 8,16

(in)writa ‘to write’

---

<sup>78</sup> This form is usually Class 1 weak, and shows both weak and strong endings in Lindisfarne. The weak ending forms can be ofund in the relevant section above.

acc.pl.neut. *inwurittena* Mt. I 21,10

*onsetta* ‘to set’

dat.pl. *onsetenu* (*abbrev.*) L. 10,30;

*onsetnu* (*abbrev.*) Mk. 6, 5, 8, 23.

*āwrīta* ‘to write’

dat.sg. *awrittne* L. I 6, 17

nom.pl.masc. *auritteno* J. 12, 16

nom.pl.neut. *auritteno* L. 21, 22, J. 20,

31; *awrittenu* L. I 2, 7, 10, 20, 24,44;

*awrittinae* L. 1 2,5; *awriteno* L. 18, 31

*begeatta* ‘to obtain’

nom.sg.fem. *begetna* Mt. 13,46

gsf. *bigetna* Mt. 1 19, 12

nom.pl.neut. *bigetne* Mt. 1 3,11

acc.pl.masc. *begetna* Mt. 4, 24

*slīta*

dat.pl.masc. *slitenU* Mt. I 8, 9.

---

---

Total light inflected *-en*  
stop-final PP in Lī 44

---

---

*ðerhgēata*

nom.pl.masc. *ðerhgotteno* J. I 6, 11.

Syncope afer [t]: 12/27

(a<sup>4</sup>) [p]+-en

*begrioppa* ‘to sieze’

acc.sg.fem. *begrippene* J. I 5, 8

*forrepen* ‘caught’

acc.sg.fem. *f’repene* J. I. 5,8

Syncope afer [p]: 0/2

(b) Root-final non-stops

(b<sup>1</sup>) [r]+-en

*blindboren* ‘born blind’

gen.sg.masc. *blindborenes* J. 9,32

*geswoeriga* ‘to swear’

dat.sg.masc. *gesuoerenū* Mk. 6, 26.

Syncope afer [r]: 0/2

(b<sup>2</sup>) [m]+-en

*cuman* ‘to come’

dat.pl.masc. *cummenum* Mt. I 5, 14

*forcuma*

nom.pl.fem. *f’cumeno* L. 24,4

dat.pl. *f’cUmenU* L. 21, 26

*nīwcumen* ‘newly arrived’

dat.sg.masc. *niw[e]cumenu* Mt. 10, 14

mg.

*benioma* ‘to name’

nom.sg.neut. *benumene* J. I 1, 7

*fornioma*  
acc.pl.masc. *f'numena* Mt. 4, 24

*efnefornioma*  
nom.sg.neut. *efnef'numene* J. I 1. 7

*genioma*  
nom.pl.masc. *genumeno* J. 19, 31  
nom.pl.neut. *genumeno* J. 20, 23

Syncope afer [m]: 0/9

(b<sup>3</sup>) [f]+-en

*fordrīfa*  
nom.pl.masc. *f'drifeno* L. 13,28. J. 12,42  
dat.pl. *f'drifenu* (abbrev.) Mk. 5,40  
acc.pl.neut. *fordrifena* Mt. I 18, 1.

*tōdrīfa*  
nom.pl.masc. *todrifeno* Mk. 14,27.

*underdrīfa* 'to drive'  
dat.sg. *underdrifen* L. I 6, 16

*āhebbā* 'to lift up'  
dat.pl.fem. *ahefenu* L. 24, 50

---

Total light inflected -en  
non-stop-final PP in *Li*. 26

---

---

Total light inflected -en  
(stop + non-stop)  
x70  
Total syncopated light  
forms: x21  
(1x j, 20x stop-final forms)

---

Syncope afer [f]: 0/7

(b<sup>4</sup>) [j]+-en

*unðwēgen* 'unwashed'  
(pp.), dat.pl. *unðuegenum* Mk. 7, 2 ;  
***unðuegnum*** Mk. I 3, 14; *unðuenum*  
Mt. 15,20; *unðweanu* (abbrev.) Mt. I  
19, 17.

*ofslāa*  
nom.pl.masc. *ofslægeno* Mt. 22, 4. L. I  
8, 1.

*gelicga*  
nom.pl.fem. *gelegeno* L. 24, 4.

Syncope afer [j]: 1/7

(b<sup>5</sup>) [tʃ]+-en

*beswīca* 'to deceive'  
nom.pl.masc. *besuicceno* L.I 2,11

Syncope afer [tʃ]: 0/1

(C2.4.1.2) Heavy forms

(a) Root-final stop forms

*gewāġta* ‘to roll’  
*gewāġteno* Mt. 17,14

*ablonga* ‘to irritate’  
np. **abloncgne** Mt. 26, 8

*worða* ‘to arise’  
dat.pl. **wordnum** Mt. I 18, 18

*āworða*  
acc.sg.fem. *awordeno* L. 23, 19  
nom.pl.fem. **awordna** L. 10, 13;  
*awordeno* L. 10, 13; *auordeno* J. 16 17  
nom.pl.neut. **awordne** Mk. 9, 3. 15,33;  
*awordeno* L. 24, 18. 24, 21; *auordeno*  
J. 19, 36  
acc.pl.neut. *awordeno* L. 4, 23

*efnegeworða*  
acc.pl.masc. *efnegewordena* Mt I 8, 15

*geworða*  
nom.sg.fem. (nom.pl.neut.?)  
*gewordeno* Mt. I 17, 12;  
dat.sg.neut. **gewordne** L. I 3, 4;  
nom.pl.masc. *gewordeno* Mt. 4, 3.  
19,12;  
nom.pl.fem. *geuordeno* J. 2, 1;  
**gewordne** Mt. 11, 23;  
nom.pl.neut. *geuordeno* J. 3, 21;  
**gewordne** J. 1 3, 16.

*behālda*  
nom.pl.neut. (?) **bihaldne** Mt I 8, 15

*beswinga*  
acc.sg.masc. *besuingene* Mt. 27, 26

*drinca*  
dat.sg. *druuncen* L. 21, 34 *druncene*

L. 1 10, 18;  
dat.pl.masc. **ðruncnu** (*abbrev.*) Mt.  
24,49.

*effforfinda*  
acc.pl.masc. *efffundeno* Mt. I 18, 20

*effforlēta* ‘leave’  
nom.pl.masc. **eftf’letno** J. I 7, 17.

*unforlēten*  
dat.sg.neut. **unf’letne** Mk. 12, 20.

*forlēta* ‘to permit’  
gen.sg.masc. *fletenes* Mk. 1 1, 16  
nom.sg.fem. *f’leteno* L. 16, 18  
acc.sg.fem. *f’leteno* Mt. 5, 32. 19, 9  
nom.pl.masc. **forletne** Mt. 16,4;  
**f’letno** Mt. 21, 17  
nom.pl.neut. **f’letno** L. 5, 11  
dat.pl.masc. **f’letnum** Mt. 13, 36;  
**f’letnu** (*abbrev.*) L. I 9, 17; **f’letno** L.  
5, 28  
dpn. **fletnu** Mk. 1, 18

*forscrinca* ‘shrink’  
acc.sg.fem. *f’scriuncen* Mt. 12, 10

*gebinda* ‘to bind’  
acc.sg.masc. *gebundene* Mt 27, 2  
nom.pl.fem. *gebundeno* J. 11, 44  
nom.pl.neut. **gebundna** Mt.18,18  
dat.pl. *gebundenu* (*abbrev.*) Mt 22,  
13. Mk. 15, 6

*gefinda*  
nom.pl.masc. *gefundena* Mt. I 4, 10

*gehālda* ‘to keep’  
nom.pl.neut. *gehaldeno* J. 20,23

*gehāta* ‘command’  
acc.sg.masc. **gehatne** Mk. I 1, 19  
nom.pl.masc. **gehatne** J. I 1, 14

*gehīwiga* ‘to form’  
acc.sg.masc. **gehiuadne** L. I 9, 2

*gesenda* ‘to send’ (strong PP endings)  
gen.sg.masc. **gesendnes** Mt. I 21, 6  
nom.pl.masc. **gesendeno** Mt. 22, 7  
acc.pl.masc. **ungesendena** Mt. I 5, 14

*geðrēatiga* *swv*  
nom.pl.masc. **geðreatne** Mt. 20, 31

*(b) Root-final non-stop forms*

*forblāwa* ‘to blow’  
dat.sg.masc. *f̃blauene* J. 6, 18.

*gedelfa* ‘to delve’  
dat.sg.neut. *gedolfene* J. I 2, 1

dat.pl.masc. **geðreatnum** Mk. I 2, 17

*indrinca* ‘to drink’  
nom.pl.masc. **indrungno** J. 2, 10.

*unbinda* ‘to unbind’  
nom.pl.neut. **unbundena** Mt. 18, 18

*āhōa* *sv*  
nom.pl.masc. **ahongne** Mt. 27, 44;  
*ahongene* Mk. 16, 6;

---

---

Total heavy inflected *-en*  
(stop + non-stop)  
x63  
Total syncopated heavy  
forms: x28

---

---





## Appendix D Lindisfarne *-ig* adjectives

The purpose of this appendix is to assess whether the historically light, but non-high affix found in *-ig<sup>1</sup>* adjectives has come to be affected by HVD, rather than by N-HVD, that is, whether it has become weight-conditioned. The historically heavy, but high *ig<sup>2</sup>* suffix should resist both forms of deletion. These have been included in the appendix for reference purposes, and can be identified by rejection of all forms of deletion, and *i*-mutation in the root, caused by the historically high derivational affix.

### Heavy *-ig<sup>1</sup>*

*ādlig* ‘sick’

gen.pl.masc. *adligra* J. 5.3

*ellðīodig* ‘foreign’

gen.pl.masc. *ellðiodigra* Mt. 27, 7

dat.pl.masc. *ellðiodigum* Mt. 17, 26

*ēadig* ‘wealthy’

nom.sg.fem. *eadigo* L. 1, 45

acc.sg.fem. *eadigo* L. 1, 48

nom.pl.masc. *eadge* Mt. 5,3. 5, 3 mg.

5, 4. 5, 5. 6. 5, 6 mg. 5, 7. 5, 7 mg.

5,8. 5,9. 5, 9 mg. 5, 10. 5, 11; *eadgo* L.

6, 20. 6, 21(2). 6, 22. 11, 28. 12, 37.

12, 38. J. I. 8, 8. 13,17. 20,29

nom.pl.fem. *eadgo* L. 23, 29

nom.pl.neut. *eadgo* Mt. 13, 16. L. 10, 23

*hālig*

nom.sg.fem. (wk) *hālga* Mt. 7.6 mg

acc.sg.fem. *hālig* Mt. 4.5, 27.53, (wk)

*hālga* Mt. 27.53,

gen.sg.masc. *hālges* Mt. 28.19, L.

2.42, J. P. 187 (13) (2)

gen.sg.neut. *hālges* L. 1.72

gen.pl.masc. *hāligra* L. 9.26, *hālga* Mt. 27.52

dat.sg.masc. *hālgum* J. I. 5.4, 2.23,

4.45 (2), P188 (2), *hāligū* Mk. 14.2,

*hālge* L. I. 2.6, 1.15, 1.41, 1.67, J. I. 3.7, 1.33(wk),

**apocope** *hālig* Mt. 1.18, 1.20, 3.11, 24.15, Mk. I. 5.16, 1.8, L. I.2.4, 2.26, J. 1.33,

**dat.pl. *hālgum* J. I. 6.6, *hālgū* Mk. 8.38**

*monigfaldig* aj.

nom.sg.fem. *monigfaldge* Mt. 5, 20.

*æcræftig* ‘skillful’ (original *æ*; *not mutation*)

nom.pl.masc. *aecræftigo* Mt. 12.24

dat.pl.masc. *æcræftigum* Mt. 12.38

*ænig* ‘any’ (original *æ*, *not mutation*)

acc.sg.fem. *ænige* Mk. 6.5

gen.sg.masc. *æniges* L. 12.15

dat.sg.masc. *ænigum* Mt. 27.14, Mk.

8.30, 16.8, L. 9.21, *ænigu* Mk. 7.36,

9.9, L. 8.43 8.56, 9.36, **syncope:**

***ængu* Mt. 18.12, *ængum* Mt. I. 1.4, I. 2.14**

**dat.sg.fem. *ængu* L. 4.26**

*tungulcræftig* aj. ‘star crafty/ magic’

nom.pl.masc. *tungulcræftiga* Mt. I 1 6,

3; *tungulcræftga* Mt. 2,1;

dat.pl. *tungulcræftgU* Mt. 2, 16

acc.pl.masc. *tungulcræftiga* Mt. 2, 7

*nænig* indef. prn. aj,

dat.sg.masc. *nænigum* J. 8, 33; *ne*

*ænigU* L. 5, 14. 9, 36; ***nængum* Mk. 1 3, 20;**

80 heavy -ig<sup>1</sup> forms (excluding apocopated forms - only forms with vowel initial suffixes)  
51 syncopated

### Light -ig<sup>1</sup>

*dysig* ‘stupid’

dat.sg.masc. *dysge* M. 7.26

*hefig* ‘heavy’

nom.sg.fem. *hefig* L. 18, 5

nom.pl.masc. *hefigo* Mk. 14, 6. 14,40;  
*hefege* Mt. 11,28

nom.pl.neut. *hefigo* Mt. 23, 23

apf. *hefiga* Mt. 23,4

*welig* aj. ‘prosperous’

dat.sg.masc. *welige* L. I 7, 14

acc.sg.masc. *welige* L. I 9, 2; *weligo*  
L. I 9, 16

nom.pl.masc. *wealigo* Mk. 12,41

dat.pl.masc. *weligum* L. 6, 24

acc.pl.masc. *weligo* L. I 8, 11. 1, 53.  
14, 12. 21,1

*monig* aj. (short, historically *ig* 1)

nom.sg.fem. *monigo* Mt. 9, 37. Mk. 6,  
35. 8,1. L. 7, 11

asn. *monige* Mt. 25, 19

nom.pl.masc. *monigo* Mt. (14 times).

Mk. (8 times). L. (5 times). J. (3

times); *monige* Mt.I 5, 1. I 19,16. I  
19,18. 8,11. 19, 30. Mk. 9, 26; *monigæ*

Mt. I 5,2; *monege* Mt. 6, 26; *monig*

Mt. 24, 5. Mk. 5, 9

npf. *monige* Mt. 1 1, 20; *moniga* Mt.  
4, 25 ; *monigo* L. 4. 25

nom.pl.neut. *monigo* Mt. 27, 55;

*moniga* Mt. I 3, 9. 27,52. L. 7, 12

gen.pl. *monigra* Mt. I 2, 14. I 6,19.

8,30. 19,22. 24,12. L.I 4, 16. 2, 34;

*monigo* L. 8, 32

dat.pl. *monigum* (12 times); *monigU*  
(8 times); *monigO* L. I 7, 18

acc.pl.masc. *monigo* Mt. (6 times);

Mk. (3 times). L. 1,16. 7.21; *monige*  
Mt. 117,14. 119,2;

*monigæ* Mt. 3. 7; *monig* Mt. 16, 10

apn. *monigo* (11 times); *moniga* Mt I  
18, 17. I 21,19

*unmonig* aj.

dat.pl. *unmonigum* J. 2,12

acc.pl.masc. *unmonige* Mt. I 17, 14

x126 light -ig 1 types

x1 syncopated only

(*monig* shows signs of being *ig* 2, rejecting apocope in WS. In *Li*, there is not enough evidence from apocope, but if we exclude the *monig* ones, the total -ig 1 lights is: 15)

	Syncope	Total
-ig <sup>1</sup> light	1 (8)	15
-ig <sup>1</sup> heavy	51 (44)	80
total	52	95

## Heavy -ig<sup>2</sup>

cȳðig ‘known’

acc.pl.neut cyðigo J. 15.15

---

## -ig<sup>2</sup>

efenmetig ‘equally mighty’

nom.pl.masc. efenmeti Mt. 26.26

gemyndig aj. ‘mindful’

nom.pl.masc. gemyndigo L. 17, 32.

eftgemyndig

Mt. 26, 75. Mk. 14, 72. L. 22, 61

gen.sg.fem. eftgemyndig J. I 7, 16

nom.pl.masc. eftgemyndig Mt. 27, 63;

eftgemyndigo L. 24, 8. J.2,17;

eftgemyndgo J.2,22. 16,4.

eftmyndig

nom.sg.masc. eftmyndig Mk. 11, 21

nom.pl.masc. eftmyndigo J. 12, 16

bærsynnig ‘notoriously guilty’ (down  
as N in Clark Hall, and note lack of  
acc.sg.masc. adjectival suffix)

nom.sg.masc. Mt. 18.17, bærsynig L.  
18.10 bærsyū L. 18.11, 18.13,

bærsuinnig Mt. I. 6.4

acc.sg.masc. bærsynnig L. 5. 27

nom.pl.masc. Mt. 21.31, **bærsunigo**  
Mk. 2.15, bærsyū L. 3.12

gen.sg.masc. bærsynnig L. I. 9.14

gen.pl.masc. bærsynnigra Mt. I. 18.8,

bærsynnigra Mk. I. 2.15, L. I. 5.2, L.

7. 34, bærsuinnigra Mt. 11.19

dat.pl.masc. bærsynnigum Mk. 2.16

mæhtig aj.,

nom.pl.neut. mæhtiga Mk. 9, 23;

mæhtigo L. 18.27; mæhto Mk. 10, 27

acc.pl.masc. mæhtigo L. 1,52.

næfig aj

nom.sg.masc. **næfge** J. 9, 8

dat.pl.masc. næfigu J. 12, 5. 13,29

scyldig aj.

dat.sg.masc. **scyldge** L. 11, 4

nom.pl.masc. **scyldgo** L. 7, 41. 13,4;

scyldiga Mt. I 20, 13

gen.pl. scyldigra L. I 5, 14

dat.pl. **scyldgum** Mt. 6, 12. L. 16, 5

syndrig aj.

dsn. syndrig Mt. 25, 15

nom.pl.masc. syndrio L. 2, 3; syndrigo  
L. 2. 3; syndrige J. 2,6

npf. s(u)yndriga Mt. I 9, 1

nom.pl.neut. syndrigo J. 10, 12;

suindrig Mt. I 3, 9; suiudrige Mt. I  
9,9. 26, 22;

dat.pl. suindrigum Mt I 3, 12. I 4,10.  
18,1. 110,4; syndrigum L. 4, 40. J. 8,

44; syndrigU L. 16, 5. J. 10, 3;

swindrigum Mt. I 4, 1

acc.pl.masc. suindrige Mt. 17, 1;

syndrigo Mt. 20, 10; syndrio L. I 9,  
11; syndriga L. I 3, 7;

apf. syndriga Mt. I 9, 10; suindriga  
Mt. I 9, 12; sundria Mt. I 9, 17;

sundrigo Mt. I 10, 3

apn. syndrigo Mk. 12,2. J. 10, 4;

suindrigo Mt. 20, 9; suindriga J. I 2,

5; syndrio Mt. I 17, 12; suindrio Mk. I

1, 17; syndrigi J. 21, 25; syndrige J.

16, 32; suindrig Mt. 13,18

unspōedig aj. ‘poor’,

nom.pl.masc. *unspoedge* Mt. 5,3mg.  
*unsynnig* aj. ‘innocent’,  
 nom.pl.masc. *u:nsynnige* Mt. 5, 3 mg.  
 acc.pl.masc. *unsuinnigo* Mt. 12, 7  
  
*untrymig* aj.  
 nom.sg.fem. *untrymig* Mk. 14, 38  
 acc.sg.masc. *untrymig* Mt. 25, 39.  
 25,44  
 nom.pl.masc. *untrymigo* L. 14, 19;  
*untryrnig* J. 6, 2; *untrumige* Mt. 1 18,  
 2  
 gen.pl. *untrymmia* L. I 4,16  
 dat.pl. *untiymigu* Mk. 16, 18  
 acc.pl.masc. *untrymigo* Mk. 6, 5. 6,  
 13. 6, 56. L. 4, 40. 10, 9; *untrymiga*  
 Mt. 10, 8; *untrymige* Mt. I 16, 11;  
*untry:migo* Mt. 14, 14.  
  
*unmaehtig*  
 nom.pl.neut. *unmaehtigo* L. 18, 27.  
  
*hu menigo*  
 nom.pl.masc. *huu menigo* L. 15, 17  
  
*menigo* aj. (light *ig*<sup>2</sup>)  
 nom.sg. (mf.) Mt. 26, 47. Mk.3,7. 4,1.  
 5,21. 5,24. 12,37. 14,43. L.5,29. 6,23.  
 8.4.22,47. J. 12, 9. 12,12;  
 dat.sg. (fn.) *menigo* Mt. 24,30. L. 23,  
 8;  
 acc.sg.fem. *menigo* L. 18, 4; *menig*  
 Mk. 4, 5;  
 nom.pl. (mfn.) *menigo* Mt. 8, 1. 10, 2.  
 24, 10. Mk.2,15. 6,31. 7,4. 10,48.  
 11,8. 15,41. L. 7,47. 8,3.10.24. 13,24.  
 21,8. 23,27. J. I 6. 7. 2, 23. 3,23. 4,39.  
 4.41. 6,60. 6,66. 8,30. 10,20. 10,41.  
 10,42. 11, 45. 11,55. 12, 11. 12,42.  
 19,20. 21,25; *mænigo* L. 14,25;  
*meniga* J. 14, 2 ; *meni*: J. 7. 31;  
 dat.pl. *menigum* J. I 5, 6. I 6, 9. I 7, 10.  
 2. 12; *menigU* L. 4, 41. 12,1. 15,13.  
 15, 29. J. 14,4. J. I 6,6; *menigo* L. 12,  
 47;  
 acc.pl. (mfn.) *menigo* Mt. 8, 16. 8, 18.  
 Mk. 1, 34. 4, 2. 5, 26. 6,13(2). 6,20.

13,6. L.3,18. 10, 41. 14,16.22,65. J. I  
 2,1. 1 3. 14. I 5, 1. I 5, 2. I 5, 6. I 5, 16.  
 I 5, 18. I 6,1. 16,18.4,1. 6,9. 7,31.  
 10,32. 11,47. 14,30. 16,12. 20, 30;  
*meniga* Mk. 12, 41; *menig*  
 Mk. 10,22.

## References

- Albright, Adam (2005) *The Morphological Basis of Paradigm Leveling*. Laura Downing, Tracy Alan Hall, Renate Raffelsiefen, eds. *Paradigms in Phonological Theory*. Oxford University Press.
- Albright, Adam (2008) *Explaining universal tendencies and language particulars in analogical change*. In Jeff Good (ed.) *Language Universals and Language Change*. Oxford University Press.
- Anderson, Stephen R. (1988). "Morphological Change." in F. Newmeyer [ed.], *Linguistics: The Cambridge Survey* (vol. 1). pp. 324-362. Cambridge: Cambridge University Press.
- Anttila, Raimo (1972). *"An Introduction to Historical and Comparative Linguistics"*. New York: Macmillan
- Anttila, Arto (2002a). "Morphologically conditioned phonological alternations". *Natural Language and Linguistic Theory*, 20, 1-41.
- Anttila, Arto. (2002b). "Variation and Phonological Theory". In Jack Chambers, Peter Trudgill, and Natalie Schilling-Estes (eds.), *Handbook of Language Variation and Change*, Blackwell, Oxford, U.K., and Malden, Massachusetts. pp. 206-243.
- Anttila, Arto and Young-mee Yu Cho. (1998). "Variation and Change in Optimality Theory". *Lingua* 104, 31-56. Special issue on Optimality Theory. Partially reprinted in John J. McCarthy (ed.). 2003. *Optimality Theory in Phonology: A Reader*. Blackwell, Oxford, U.K. and Malden, Massachusetts, with an introductory note by the editor.
- Benua, L. (1997). *Transderivational identity: phonological relations between words*. PhD dissertation, University of Massachusetts, Amherst. Published (2000) as *Phonological relations between words*. New York: Garland.
- Bermúdez-Otero, Ricardo (forthcoming). *Stratal Optimality Theory*. Cambridge: OUP.
- Bermúdez-Otero, Ricardo (2011). "Introduction to Part IV: when a knowledge of history is a dangerous thing". In David Denison, Ricardo Bermúdez-Otero, Chris McCully & Emma Moore (eds) *Analysing Older English*. Cambridge: Cambridge University Press.
- Bermúdez-Otero, Ricardo & April M. S. McMahon (2006). English phonology and morphology. In Bas Aarts & April McMahon (eds), *The handbook of English linguistics*. Oxford: Blackwell.

- Bermúdez-Otero, Ricardo (2005). *The Life Cycle of Constraint Rankings: Studies in Early English Morphophonology*. University of Newcastle upon Tyne.  
<http://www.bermudez-otero.com/lifecycle.html>.
- Bermúdez-Otero, Ricardo & Richard M. Hogg (2003). The actuation problem in Optimality Theory: phonologisation, rule inversion, and rule loss. In D. Eric Holt (ed). *Optimality Theory and language change*. Dordrecht: Kluwer.
- Boersma, Paul (1997). How we learn variation, optionality, and probability. *Proceedings of the Institute of Phonetic Sciences of the University of Amsterdam* 21: 43-58.
- Boersma, Paul & Bruce Hayes (2001). Empirical tests of the gradual learning algorithm. *Linguistic Inquiry* 32: 45-86.
- Bosworth, Joseph and T. Northcote Toller (1972; original edition 1898). *An Anglo-Saxon Dictionary*. Oxford University Press
- Broselow, Ellen (1992). Parametric variation in Arabic dialect phonology. In Ellen Broselow, Mushira Eid & John McCarthy (eds). *Perspectives on Arabic linguistics IV: Papers from the Fourth Annual Symposium on Arabic Linguistics*. Amsterdam: Philadelphia. 7-45.
- Campbell, Alistair (1959). *Old English grammar*. Oxford: Oxford University Press.
- Cedergren, Henrietta J. and Sankoff, David (1974). *Variable rules: performance as a statistical reflection of competence*. *Language* 50(2), 333-55.
- Chomsky, Noam, & Morris Halle (1968). *The sound pattern of English*. New York: Harper and Row.
- Clements, George N. (1990). "The role of the sonority cycle in core syllabification". In John Kingston & Mary Beckman (eds). *Papers in laboratory phonology, 1: Between the grammar and physics of speech*. Cambridge: Cambridge University Press. 283-333.
- Clements, George N. (1992). "The sonority cycle and syllable organization". In Wolfgang U. Dressler, Hans C. Luschützky, Oskar E. Pfeiffer & John R. Rennison (eds) (1992). *Phonologica 1988. Proceedings of the Sixth International Phonology Meeting*. Cambridge: Cambridge University Press. 63-76.
- Clements, George N. (2005). "Does sonority have a phonetic basis? Comments on the chapter by Bert Vaux". In Eric Raimy & Charles Cairns, eds., *Contemporary Views on Architecture and Representations in Phonological Theory*. Cambridge, MA: MIT Press.

(2006 version accessed at <http://nickclements.free.fr/publications/2005c.pdf>)

- Coetzee, Andries & Joe Pater (2009). 'The place of variation in phonological theory'. Goldsmith, Riggle and Yu (eds.), *2nd Edition of the Handbook of Phonological Theory*, Goldsmith, Riggle and Yu (eds.).  
Accessed at <http://roa.rutgers.edu/files/946-0108/946-COETZEE-0-0.PDF>
- Collie, Sarah (2007) *English stress preservation and Stratal Optimality Theory*. PhD Thesis, University of Edinburgh.
- Cook, Albert (1894). *A glossary of the Old Northumbrian Gospels: (Lindisfarne Gospels or Durham book)*. Halle: Niemeyer.
- Cosijn, P. J. (1888). *Altwestsächsische Grammatik*. Vol. 1 (1883), Vol. 2: Die Flexion (1886). Den Haag: Martinus Nijhoff.
- Davis, Stuart & Gina Toretta (1998). An optimality theoretic account of compensatory lengthening and geminate throwback in Trukese. *NELS* 28: 111–125
- Dresher, B. Elan (1978). Old English and the theory of phonology. PhD dissertation, University of Massachusetts, Amherst. Published (1985) New York: Garland.
- Earle, John & Charles Plummer (1892–99). *Two of the Saxon chronicles parallel: with supplementary extracts from the others / a revised text ed., with introduction, notes, appendices, and glossary by Charles Plummer ; on the basis of an edition by John Earle*. Oxford : Clarendon Press.
- Eliason, Norman (1948). *Old English vowel lengthening and vowel shortening before consonant groups; an extract from Vowel shortening in English*. Baltimore
- Fulk, R. D. (2010). 'The roles of phonology and analogy in Old English high vowel deletion'. *Transactions of the Philological Society* 108 pp. 126–144
- Gallée, J. H. (1993). *Altsächsische Grammatik*. 3rd edn. Tübingen: Max Niemeyer.
- Gąsiorowski, Piotr (1997). *The phonology of Old English stress and metrical structure*. Frankfurt/Main: Peter Lang Verlag.
- Giegerich, Heinz. (1999). *Lexical strata in English: morphological causes, phonological effects. Volume 89 of Cambridge studies in linguistics*. Cambridge: Cambridge University Press.
- Goldsmith, John A. 1990. *Autosegmental and metrical phonology*. Oxford: Basil Blackwell.



- Guy, Gregory R. (1997a). *Violable is variable: Optimality theory and linguistic variation*. *Language Variation and Change* 9, 333-47.
- Guy, Gregory R. (1997b). *Competence, performance and the generative grammar of variation*. In Hiskens et al. 1997 (pp. 125-43).
- Hale, M., M. Kisoock & C. Reiss (1998). "Output-Output correspondence in Optimality Theory". *Proceedings of WCCFL XVI*. Stanford: CSLI Publications. 14pp. [ROA-202-0697, Rutgers Optimality Archive, <http://roa.rutgers.edu>]
- Halle, Morris & Jean-Roger Vergnaud (1987b). *An essay on stress*. Cambridge MA: MIT Press.
- Harris, John (1989) "Towards a Lexical Analysis of Sound Change in Progress". *Journal of Linguistics*, Vol. 25, No. 1 (Mar., 1989), pp. 35-56
- Healey, Antonette di Paolo (editor), Richard L. Venezky (director of computing), Peter Mielke (systems analyst) & John Price-Wilkin (consultant) (1998). *The Dictionary of Old English corpus in electronic form (TEI-P3 conformant version 1998 release)*. Toronto: Dictionary of Old English Project, Centre for Medieval Studies, University of Toronto. Distributed by Oxford Text Archive.
- Hermann, M. Eduard (1931). *Lautgesetz und Analogie*. Gottingen: Gesellschaft der Wissenschaften.
- Hock, Hans Henrich (1986). *Principles of Historical Linguistics*. Berlin: Mouton de Gruyter. [2<sup>nd</sup> edn, 1991]
- Hock, Hans Henrich (2003). 'Analogical Change'. In Brian D. Joseph and Richard D Janda. *The Handbook of Historical Linguistics*. Oxford: Blackwell.
- Hogg, Richard M. (1988). On the impossibility of Old English dialectology. In Dietrich Kastovsky & Gero Bauer (eds), *Luick revisited*. Tübingen: Gunther Narr.
- Hogg, Richard M. (1992). *A grammar of Old English*. Vol. 1: Phonology. Oxford: Basil Blackwell.
- Hogg, Richard M. and van Bergen, Linda (eds) (1998). *Historical Linguistics 1995. Volume 2: Germanic Linguistics*. Amsterdam and Philadelphia: John Benjamins.
- Hogg, Richard M. (2000). On the (non-)existence of High Vowel Deletion. In Aditi Lahiri (ed.) *Analogy, levelling, markedness: principles of change in phonology and morphology*. Berlin: Mouton de Gruyter. 353-376.
- Hogg, Richard and R. D. Fulk (2011). *A Grammar of Old English. Volume 2: Morphology*. Oxford: Wiley Blackwell.

- Idsardi, William J. (1994). Open and closed feet in Old English. *Linguistic Inquiry* 25: 522-533.
- Karlsson, Goran. 1978. Kolmi- ja useampitavuisten nominivartaloiden loppu-A:n edustuminen monikon i:n edellä [The realization of the final A of trisyllabic and longer nominal stems before the plural i]. In Rakenteita. Juhlakirja Osmo Ikolan 60-vuotispäiväksi, 6.6.1978., 86.99. Tutun Yliopiston suomalaisen ja yleisen kielitieteen laitos.
- Kager, René (1999a). *Optimality Theory*. Cambridge: Cambridge University Press.
- Kager, René (1999b). "Surface opacity of metrical structure in Optimality Theory". In Ben Hermans & Marc van Oostendorp (eds), *The derivational residue in phonological Optimality Theory*. Amsterdam: John Benjamins. 207-245.
- Kenstowicz, M. (1996) *Base-Identity and Uniform Exponence: Alternatives to Cyclicity*. Jacques Durand and Bernard Laks, eds. *Current Trends in Phonology: Models and Methods*. CNRS, Paris-X and University of Salford Publications.
- Ker, N. R. (1957). *Catalogue of manuscripts containing Anglo-Saxon*. Oxford: Clarendon Press.
- King, Robert (1969). *Historical Linguistics and Generative Grammar*. Prentice-Hall: Englewood Cliffs, New Jersey.
- Kiparsky, Paul (1965). *Phonological Change*. Ph.D. dissertation, MIT
- Kiparsky, Paul (1968). Linguistic universals and linguistic. In Emmon Bach and Robert T. Harms (eds), *Universals in Linguistic Theory* (pp. 171-202). New York: Holt, Rinehart and Winston. [Repr. in Keiler 1972 (pp. 338-67). Also in Baldi and Werth 1978 (pp. 218-35, as part of ch. 11, "Rule reordering".)]
- Kiparsky, Paul (1978). "Analogical change as a problem for Linguistic Theory". *Studies in the Linguistic Sciences* 8(2), 77-96. (1965) *Phonological Change*. Ph.D. dissertation, MIT.
- Kiparsky, Paul (1982). "Lexical phonology and morphology". In I. Yang (ed.), *Linguistics in the morning calm*. Seoul: Hanshin. 3-91.
- Kiparsky, Paul (1993b). Blocking in non-derived environments. In Sharon Hargus and Ellen M. Kaisse (eds), *Studies in Lexical Phonology* (pp. 277-313). San Diego: Academic Press.
- Kiparsky, Paul (1995). The phonological basis of sound change. In Goldsmith, John A. (ed.) *The handbook of phonological theory*. Cambridge, MA: Blackwell Publishers. 640-670.

- Kiparsky, Paul (1997). The rise of positional licensing. In van Kemenade and Vincent 1997 (pp. 460–94).
- Kiparsky, Paul (1998b). ‘Sievers’ Law as prosodic optimization’. In Jay Jasanoff, H. Craig Melchert & Lisi Oliver (eds). *Mír Curad. Studies in honor of Calvert Watkins*. Innsbruck: Innsbrucker Beiträge zur Sprachwissenschaft.
- Kiparsky, P. (2000). “Opacity and cyclicity”. *Linguistic Review* 17: 351-365.
- Kiparsky, Paul (2003). ‘Finnish Noun Inflection’, in Satu Manninen and Diane Nelson (eds.),
- Kiparsky, Paul (in press). *Paradigm effects and opacity*. Stanford: CSLI Publications.
- Kuryłowicz, Jerzy (1945-9). La nature des proces dits “analogiques.” *Acta Linguistica* 5, 15-37. [Repr. in Hamp et al 1966 (pp. 168-74). Trans. in Winters 1995 (pp. 113-45).]
- Keyser, Samuel J. & Wayne O’Neil (1983). “Exceptions to high vowel deletion in the Vespasian Psalter and their explanation”. In Michael Devenport, Erik Hansen, and Hans F. Nielsen (eds.) *Current topics in English historical linguistics*. 137–164. Odense: Odense University Press.
- Labov, William (1969). “Contraction, deletion, and inherent variability of the English copula”. *Language* 45(4), 715-62.
- Labov, William, Yaeger, Malcah, and Steiner, Richard (1972). *A Quantitative Study of Sound Change in Progress*. Philadelphia: U.S. Regional Survey.
- Labov, William (1978). “On the use of the present to explain the past”. In Baldi, Philip and Ronald N. Werth (eds.). *Readings in Historical Phonology*. University Park, Pennsylvania State University Press: 275–312.
- Lahiri, Aditi (2009). “The Dental Preterites in the History of English”. In K. Hanson & S. Inkelas (eds) *The Nature of the Word: Studies in Honor of Paul Kiparsky*. 507-525 Cambridge MIT Press.
- Lass, Roger (1994). *Old English: a historical linguistic companion*. Cambridge: Cambridge University Press.
- Lehmann, Winfred (1962). *Historical Linguistics*. New York: Holt.
- Liberman, M. (1994), *Optionality and Optimality*. Fragment of a draft, Department of Linguistics. University of Pennsylvania.

- Luick, Karl, (1914-40) reprinted 1964. *Historische Grammatik der englischen Sprache*. Edited by F. Wild & H. Koziol. Part 1 (1914-1921), Part 2 (1929–1940). Stuttgart: Bernhard Tauchnitz / Oxford: Basil Blackwell.
- Mańczak, Witold (1980). Laws of analogy. In Fisiak 1980 (pp. 283-8).
- McCarthy, John & Alan Prince (1995). “Faithfulness and reduplicative identity”. In Jill Beckman, Laura Walsh Dickey & Suzanne Urbanczyk (eds), *Papers in Optimality Theory*. (University of Massachusetts Occasional Papers in Linguistics 18.) Amherst, MA: Graduate Linguistic Student Association. 249-384.
- McCarthy, John. (2005b). “The length of stem-final vowels in Colloquial Arabic” Perspectives on Arabic Linguistics XVII-XVIII. Ed. Mohammad T. Alhawary and Elabbas Benmamoun. Amsterdam: Benjamins. 1-26. Available at: [http://works.bepress.com/john\\_j\\_mccarthy/49](http://works.bepress.com/john_j_mccarthy/49)
- McCarthy, John J. (2005a) “Optimal Paradigms”. In Laura J. Downing, T. Alan Hall & Renate Raffelsiefen (eds.) *Paradigms in Phonological Theory*. Oxford: Oxford University Press. 170–210.
- McCully, Christopher B. & Richard M. Hogg (1990). “An account of Old English stress”. *Journal of Linguistics* 26: 315-339.
- McMahon, April M. S. (1994) *Understanding Language Change*. Cambridge: Cambridge University Press.
- Minkova, Donka. 2012. “Syllable weight and the weak-verb paradigms in Old English.” In David Denison, Ricardo Bermúdez-Otero, Christopher B. McCully & Emma Moore, with the assistance of Ayumi Miura (eds). *Analysing older English* (Studies in English Language). Cambridge: Cambridge University Press.
- Mitchell, Bruce, Christopher Ball & Angus Cameron (1975). Short titles of Old English texts. *Anglo- Saxon England* 4: 207-221.
- Mitchell, Bruce, Christopher Ball & Angus Cameron (1979). Short titles of Old English texts: addenda and corrigenda. *Anglo-Saxon England* 8: 331-333.
- Mitchell, Bruce Fred C. Robinson (2002). *A guide to Old English*. Oxford: Blackwell.
- Noske, Roland (1993). *A Theory of Syllabification and Segmental Alternation. With studies on the phonology of French, German, Tonkawa and Yawelmani*. Tübingen: Niemeyer (*Linguistische Arbeiten* Series nr. 296).
- Pajak, Bożena (2010). *Contextual constraints on geminates: the case of Polish*. In Proceedings of the 35th Annual Meeting of the Berkeley Linguistics Society (pp. 269-280). Berkeley, CA: University of California, Berkeley.

- Pater, Joe (2000). Non-uniformity in English secondary stress: the role of ranked and lexically specific constraints. *Phonology* 17: 237-274.
- Paul, Hermann (1880). *Prinzipien der Sprachgeschichte*. [2<sup>nd</sup> edn Halle: Niemeyer, 1886; 5<sup>th</sup> edn 1920. Rpr. Tübingen: Niemeyer, 1970. 2<sup>nd</sup> edn trans. Herbert Augustus Strong as *Principles of the History of Language*. New York: Macmillan, 1890; 1<sup>st</sup> edn 1888-9. Rpr. College Park, MD: McGrath, 1970.]
- Peinovich, M. P. (1979). Old English noun morphology: a diachronic study. (North-Holland Linguistic Series 41). Amsterdam: North-Holland Publishing Company.
- Pope, John C. (ed) (1967-8). Homilies of Ælfric: a supplementary collection. Volume I (1967), Volume II (1968). (Early English Text Society 259-260.) London: Oxford University Press.
- Prince, Alan & Paul Smolensky (1993). Optimality Theory: constraint interaction in generative grammar. Ms., Rutgers University Center for Cognitive Science Technical Report #2. (Revised August 2002: ROA 537.)
- Raffelsiefen, Renate (2000). 'Prosodic form and identity effects in German'. *Zas Papers in Linguistics* 19. 137–175.
- Ringe, Don, 2002. 'Syncopated present indicative forms in Old English', in Alfred R. Wedel & Hans-Jörg Busch (eds.), *Verba et Litterae: Explorations in Germanic Languages and German Literature – Essays in Honor of Albert L. Lloyd*, Newark, DE: Linguatext, 125–56.
- Roach, P., Sergeant, P. & Miller, D. (1992). "Syllabic consonants at different speaking rates: A problem for automatic speech recognition". *Speech Communication* 11: 475–479.
- Ross, Alan (1930–7). *Studies in the Accidence of the Lindisfarne Gospels*. Kendal: Leeds school of English language texts and monographs; no. II.
- Russ, Charles V. J. (1978). Historical German phonology and morphology. Oxford : Clarendon Press.
- Scott, Penny (2005). *Morphologisation in West Saxon adjectives*. MLitt Thesis. Newcastle University.
- Selkirk, Elizabeth O. (1984). On the major class features and syllable theory. In Mark Aronoff & Richard T. Oehrle (eds). *Language sound structure: Studies in phonology presented to Morris Halle by his teacher and students*. Cambridge, MA: MIT Press. 107-136.
- Sievers, Eduard (1893). *Altgermanische Metrik*, Halle: M. Niemeyer.

- Sievers, Eduard (1898). *Angelsächsische Grammatik*, 3<sup>rd</sup> edn. Halle: Niemeyer.
- Skeat, W. W. (ed) (1871-87). The four gospels in Anglo-Saxon, Northumbrian, and Old Mercian versions. 4 vols. Cambridge.
- Sturtevant Edgar H. (1917). *Linguistic Change*. Chicago: University of Chicago Press.
- Sturtevant Edgar H. (1947). *An Introduction to Linguistic Science*. New Haven: Yale University Press.
- Suphi, Menekse (1988). "Old English stress assignment". *Lingua* 75: 171-202.
- Suzuki, Seiichi (1988). "On the 1sg.pres.ind. ending -u and high vowel deletion in Anglian and other West Germanic Languages". *Indogermanische Forschungen* 93: 210–24.
- Sweet, Henry (ed) (1871-2). King Alfred's West-Saxon version of Gregory's Pastoral care. (Early English Text Society original series 45, 50). London: N. Trübner & Co. Reprinted (1958). London: Oxford University Press.
- Smolensky, Paul (1993). *Harmony, markedness, and phonological activity*. Handout from Rutgers Optimality Workshop I, New Brunswick, NJ.
- Suzuki, Keiichiro, (1998). *A typological investigation of dissimilation*. Ph.D. thesis, University of Arizona, available from the Rutgers Optimality Archive as ROA-281. URL <http://roa.rutgers.edu/view.php?roa=281>
- Sweet, Henry (ed) (1883). King Alfred's Orosius, part I: Old English text and Latin original. (Early English Text Society original series 79). London: N. Trübner & Co.
- Sweet, Henry (ed) (1871–2). *King Alfred's West-Saxon version of Gregory's Pastoral care*. (Early English Text Society original series 45, 50). London: N. Trübner & Co. Reprinted (1958). London: Oxford University Press.
- Thompson, Penelope (2008). *The Lexicalization of Syncope: Derivational affixes in West Saxon Adjectives*. Handout: Paper for the ICEHL Munich.
- Thompson, Penny (2007). *Apocope vs. Syncope in West Saxon Adjectives: evidence for cophonologies*. Poster presentation at the Manchester Phonology Meeting.
- Thurgood, Graham. (1993). "Geminates: A Cross-linguistic Examination". In J. Ashmore Nevis, G. McMenemy & G. Thurgood, eds., *Papers in Honor of Fred- erick H. Bengelman on the Occasion of the Twenty-Fifth Anniversary of the Department of Linguistics, CSU Fresno*, 129-139. Fresno, CA: Department of Linguistics, California State University, Fresno.

- Toft, Zoë (2002). "The Phonetics and Phonology of some Syllabic Consonants in Southern British English". *ZAS Papers in Linguistics* 28 (111–144)
- Toon, T. E. (1983). *The Politics of Early Old English Sound Change*. New York: Academic Press.
- Toon, Thomas E (1992). "Old English Dialects." *The Cambridge History of the English Language: The Beginnings to 1066*. Ed. Richard M. Hogg. Cambridge: Cambridge University Press.
- Trousdale, Graeme (2005). The social context of Kentish Raising: issues in Old English sociolinguistics. *International Journal of English Studies* 5, 59-76.
- Tesar, B. & Smolensky, P. (1993). *The learnability of Optimality Theory: An algorithm and some basic complexity results*. Technical Report CU-CS-678-93, Department of Computer Science, University of Colorado at Boulder. October. ROA-2. Expanded to [17].
- Vennemann, Theo (1988). Preference laws for syllable structure and the explanation of sound change, with special reference to German, Germanic, Italian and Latin. Berlin: Mouton de Gruyter.
- Vincent, Nigel (1974). *Analogy Reconsidered*. In Anderson & Jones (eds.) (1974): 427–45.
- Wagner, Karl Heinz (1969). *Generative grammatical studies in the Old English language*. Heidelberg: Julius Groos.
- Wiese, Richard (1996). *The Phonology of German*. Oxford: Oxford University Press.
- Wright, Joseph & Elizabeth Mary Wright (1925). *Old English Grammar*. Student's series of historical and comparative grammars. Oxford: Oxford University Press.
- Zec, Draga (1993). 'Rule domains and phonological change'. In Sharon Hargus and Ellen M. Kaisse (eds.), *Studies in Lexical Phonology* (pp. 365–405). San Diego: Academic Press.

## Electronic Resources

OtSoft (Hayes, Tesar, and Zuraw 2003)

<http://www.linguistics.ucla.edu/people/hayes/otsoft/>

Bosworth, Joseph and T. Northcote Toller (1898) '*An Anglo-Saxon dictionary, based on the manuscript collections of the late Joseph Bosworth*'. Digital version.

<http://bosworth.ff.cuni.cz/>

Lowry, Richard (2001–11) *VassarStats: Website for Statistical Computation*.  
<http://faculty.vassar.edu/lowry//odds2x2.html>

Oxford English Dictionary Online:  
<http://www.oed.com/viewdictionaryentry/Entry/61506>